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PREFACE

The addresses and papers published in this volume were presented at the semi-annual meeting of the Academy of Political Science, fortieth year, held at the Hotel Astor, New York City, on April 30, 1920. In planning the meeting, the Committee on Arrangements undertook to provide a forum for the discussion of leading foreign and American authorities of the most urgent economic problem of the day.

INFLATION AND HIGH PRICES—mounting living costs and the readjustments in wages and other incomes that they necessitate—these are proving only less unsettling to the world than was the Great War itself. Amid all of the diversity of opinion expressed in the following pages, agreement in regard to certain fundamentals stands forth clearly. That inflation is the major reason for high prices is generally conceded. That among its causes are excessive issues of paper currencies and an unprecedented expansion of bank credit in connection with government borrowing is also accepted. Inflation being the cause, deflation—gradual deflation, since a sudden contraction might prove worse than the disease—is the obvious remedy. To bring this about governments must return to the sound peace policy of living within their incomes, that is, refraining from adding further to their indebtedness, and beginning, on however small a scale, repayment of outstanding loans. That this is not an impossible counsel of perfection is attested by the substantial progress already made by the United Kingdom, by France and by Italy, as set forth in the significant papers by Mr. Broderick, M. Casenave and Professor Attolico which follow. It is equally certain that to succeed in this program governments must have the same whole-hearted coöperation on the part of their citizens that they were able to command so signally during the war. The first form of indebtedness that should be retired is the excessive issues of paper currencies. Any progress toward such retirement means the continued imposition of heavy taxes. Not only must these still be borne, but unless to the saving which they require of taxpayers are added voluntary savings to take over from the banks the government securities with which they are now loaded up and to restore the capital equipment of the world's industries, the attempt to reëstablish normal conditions must fail. Along with and as the source of this great volume of saving there must be increased production.

The committee was so impressed with the vital importance of this last factor that several of the important addresses deal exclusively with Increased Production as a Remedy. The emphasis on the contribution to this end which may be made through the elimination of industrial disturbances in Governor Allen's address, and the service which may be rendered even by the profiteer brought out by Mr. Roberts, are particularly worthy of attention.

For the United States to increase production is easy. But European countries lack the raw materials necessary to set their factories in motion and also the means to purchase these materials. In addition to diagnosing in masterly fashion the causes of the world's ills, Mr. Paul Warburg in his address on "Inflation as a World Problem" presents an earnest plea for the working out of practicable plans for bringing together surplus American raw materials and idle European labor. How this may be accomplished through the banking associations authorized by the Edge Act is explained by Mr. W. S. Kies.

The success of these meetings in bringing together the notable papers which follow, was due first and foremost to the speakers themselves, to whom the grateful thanks of the Academy are extended. Special acknowledgment should be made to the distinguished foreign participants, the Honorable J. Joyce Broderick, Commercial Counsellor of the British Embassy, M. Maurice Casenave, French High Commissioner to the United States, and Professor B. Attolico, Italian Minister Plenipotentiary and Commissioner General for Finance and Economic Matters. Although unable to be present in person, Hartley Withers, Esq., editor of *The Economist,* London, generously submitted the valuable paper which follows his name. Only less important was the assistance rendered by the Committee on Arrangements, Messrs. Paul D. Cravath, A. Barton Hepburn, J. H. Hollander, Pierre Jay, Samuel McCune Lindsay, R. C. McCrea, Wesley C. Mitchell, Dwight W. Morrow, Seward Prosser, Albert Shaw, F. A. Vanderlip, Paul Warburg, and H. Parker Willis, to whom the Academy also extends its expressions of appreciation.

THE EDITOR.

CAUSES AND PROGRESS OF INFLATION

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THE causes of the inflation [1] which the country has experienced since 1913 may be divided into two groups: (1) Non-war causes or causes that presumably would have been operative had there been no war and; (2) war causes. This division is a convenient one for purposes of analysis and exposition, but, as for most classifications in the field of economics, the line of demarkation is not a sharp one.

From 1896 to 1913 the United States, like all other gold standard countries, went through a period of inflation. In those 17 years the country's physical volume of business increased about 117 per cent.[2] The country's stock of monetary gold increased 212 per cent, the amount of money in circulation, 123 per cent; and bank deposits, subject to check, 201 per cent.[3] There is evidence of substantial increase during the same period both in the rate of money and deposit turnover.[4]

[1] Two years ago in an article on Inflation written for the *American Economic Review*, the writer defined inflation as follows: "Without attempting to harmonize the various conflicting views, nor to give a precise and formal definition of inflation, we may note that there is one idea common to most uses of the word, namely, the idea of a supply of circulating media in excess of trade needs. It is the idea of redundancy of money or circulating credit or both, a redundancy that results in rising prices. . . . More specifically, inflation occurs when, *at a given price level*, a country's circulating media—cash and deposit currency—increase relatively to trade needs." It is in the above sense that the term is used in the present paper. "Inflation," *American Economic Review*, June 1918, p. 247.

[2] The nine indices of the physical growth of business (excluding the indices expressed in dollar values used in my *Money and Prices*, pp. 130-131) showed an average increase from 1896 to 1908 of 93 per cent. Irving Fisher's Index of the physical volume of trade increased 26 per cent from 1908 to 1913. Together these indices showed an increase from 1896 to 1913 of 117 per cent. Irving Fisher's index alone showed an increase of 138 per cent for the same period.

[3] Irving Fisher's figures are used for bank deposits, *American Economic Review*, June, 1915, chart facing page 408.

[4] *Ibid.*

Here was an expansion of currency and circulating credit far in excess of the growth in the physical volume of business —an expansion due chiefly to the great increase in the world's gold production, an increase of which the United States received a continually growing share. Under such circumstances a great rise in the country's price level was to be expected. What took place is familiar to all. Our American wholesale price level rose about 50 per cent during the 17 years from 1896 to 1913, representing an average annual increase of about 3 per cent, measured arithmetically, and about 2.4 per cent, measured geometrically.

The forces that pushed up the price level during the period 1896 to 1913 were still operating when the European War broke out. They presumably would have continued to push up prices for some time had there been no war, and they exerted an upward pressure on the price level during the war itself. While the world's annual gold production declined somewhat during the later years of the war, the amounts produced none the less continued to be large, as compared with the average for any considerable number of previous years, and they were being poured into a reservoir of gold whose level had been for many years a rising one.

The second class of non-war causes leading to inflation during the years 1913 to 1920 were those growing out of the reorganization of our American banking system. Here it is difficult to distinguish between non-war and war causes because it is impossible to determine to what extent, if any, some of the organic changes made in our banking system during the last six years should be attributed to war causes. An important instance of this kind is the federal reserve amendment of June 21, 1917, providing for a further reduction in legal reserves of member banks and discontinuing entirely all cash-in-vault legal reserve requirements for these banks. Would this change have been made had it not been for the war? It is very doubtful.

At any rate, important reductions in legal reserve requirements were made by our federal reserve legislation prior to the outbreak of the war in Europe and with no reference to such a contingency. Our banking system had been cumbersome and our use of reserves exceedingly wasteful. Abnormally large reserves had been needed to support a given volume of deposit

WORLD'S GOLD PRODUCTION

	Ounces	General Index Number (average 1895-1904 = 100)	Special Index Number (1913 = 100)
1895	9,615	73.1	
1896	9,784	74.4	
1897	11,421	86.8	
1898	13,878	105.6	
1899	14,838	112.8	
1900	12,315	93.6	
1901	12,626	96.0	
1902	14,355	109.2	
1903	15,853	120.5	
1904	16,804	127.8	
1905	18,396	139.9	
1906	19,471	148.1	
1907	19,977	151.9	
1908	21,422	162.9	
1909	21,965	167.0	
1910	22,022	167.5	
1911	22,348	170.0	
1912	22,549	171.5	
1913	22,250	169.2	100
1914	21,240	166.8	95.4
1915	22,675	172.5	102.
1916	21,970	167.6	98.6
1917	20,290	154.3	91.0
1918	18,427	140.1	82.7
1919	17,664 (est.)	134.3	79.4

credit, because our reserves were widely scattered and immobile and because our circulating bank credit was woefully inelastic. The remedying of these evils through the federal reserve system made possible and desirable the release from reserves of large quantities of money with corresponding reductions in reserve ratios. Under normal conditions this release would have resulted in heavy net exportations of gold.

An idea of the extent of the reduction in ultimate legal reserve requirements contemplated by the federal reserve act at the time of its enactment may be obtained by asking ourselves how the law would have affected the ultimate legal cash reserves held against deposits in the case of three national banks: one in a central reserve city, one in a reserve city, and one in a country bank city. It is assumed that each bank had at both dates demand deposits of $1,200,000, time deposits (payable after 30 days' notice) of $300,000, and a national bank note circulation of $100,000. The situation in 1913, and

the situation as it ultimately would have been had the legal reserve requirements of the original act gone into full effect, are shown in the following table:

ULTIMATE LEGAL CASH RESERVE

	1913.[1]		After federal reserve act of 1913 should have gone into full effect.	
	Amount.	Per cent. of deposits.	Amount.[2]	Per cent. of deposits.
Central Reserve City Bank. .	$375,000	25	$156,755	10.5
Reserve City Bank	234,375	15.6	132,400	8.8
Country Bank	111,094	7.4	108,018	7.2
All three banks . . .	$720,469	16.0	$397,173	8.8

In the central reserve city bank it will be observed the reduction would have been from a reserve representing 25 per cent of deposits to one representing 10½ per cent. In the reserve city bank the corresponding reduction would have been from 15.6 per cent to 8.8 per cent, and in the country bank from 7.4 per cent to 7.2 per cent. The figures show an average reserve for the three banks of 16 per cent before the federal reserve act was passed and show that the average would have been 8.8 per cent, had the reserve requirements of the act in its original form gone into full operation. Some idea of how important this reduction would have been will be obtained when it is noticed that the net deposits in 1913 (August 9th) were $1,619 millions for all central reserve city banks, $1,882 millions for all reserve city banks, and $3,596 millions for all country banks. The total net deposits for the three groups of banks combined were $7,097 millions. A reduction in ultimate legal cash reserves from 16.0 per cent to 8.8 per cent on the total net deposits in 1913 would have released $511 millions

1 In computing reserve amounts fractional parts of a dollar have been ignored.

2 That part of the legal reserve that the law permitted to be held at the bank's option either as cash in vault or as a deposit with the federal reserve bank, it has been assumed would have been held half in each form.

of reserve money which, taking an 8.8 per cent average reserve as the ultimate legal reserve base, would have been adequate for a deposit expansion of over $5,800 millions. Under peace conditions of course an expansion of such dimensions in deposit currency would have been impossible, for a large part of the released reserves would have left the country in the form of heavy gold exports. Some of this gold would have gone into the arts. The gold embargo later prevented the exportation of gold except in very small quantities, but that is a war measure and will be considered later. It may be claimed that a reduction in legal reserve requirements is a very different thing from a reduction in actual cash reserves. No one, however, can study the bank reserve experiences of the United States of recent years without being impressed with the close connection between our legal requirements and our actual reserves. Actual reserves in the United States usually stand very close to the legal minima.[1] The program laid down in the federal reserve act as originally passed, for the gradual modification of legal reserves until they should reach the limits given above after a three-year period, was never fully carried out. Before that time the war struck us and under the pressure of war demands legal reserves were reduced to a much further extent than was provided for in the act of 1913. Those changes will be considered later. The amount of inflation that would have resulted from the carrying through of the reserve reduction provisions of the original federal reserve act cannot be attributed to the war, although the war probably would have expedited the process of inflation through taking up the slack much more quickly than otherwise would have been the case.

The other non-war causes of inflation call for only a brief consideration. The first is the introduction of the new federal reserve notes. In 1913 the most important item in our paper money circulation was the gold certificate which was backed dollar for dollar by gold and of which the circulation amounted to almost exactly one billion dollars. The new federal reserve note called for a legal minimum gold reserve of

[1] See *Annual Report of the Comptroller of the Currency, 1913*, pp. 278-281; also O. M. W. Sprague, *Crises Under the National Banking System*, p. 216.

40 per cent. Even before our entrance into the war, the federal reserve bank had adopted the policy of withholding gold certificates from circulation and putting in their places federal reserve notes. This policy strengthened the gold position of the federal reserve banks and put into circulation a more elastic form of paper money. It none the less was a cause of inflation; for it substituted in active circulation, a form of paper money requiring a 40 per cent legal reserve for one requiring 100 per cent.

Had it not been for the war many years might have elapsed before the actual reserves against federal reserve notes were reduced to the legal minimum of 40 per cent, but it is a fair guess, in the light of American experiences with legal reserve minima, that the time would ultimately have come. A billion dollars of gold certificates, if withdrawn from circulation and used as a 40 per cent reserve for federal reserve notes, would permit a net currency expansion of $1,500 millions. Under normal conditions the effect of such a policy on prices would have been small for the policy would have forced gold out of the country and thereby the resulting inflation would have been spread out rather thinly over the gold standard countries of the entire world. Here again, however, we encounter the gold embargo induced by the war, which entirely changed the situation.

Other non-war causes of inflation are found in the development of the clearing and collection system of the federal reserve banks and in the establishment of the gold settlement fund. These developments represent some of the most creditable features of our American banking history and the federal reserve authorities deserve high praise for what they have accomplished in this connection. None the less these much needed improvements contributed to inflation. They have increased the efficiency of our currency and circulating credit and enabled the average dollar to do more money work than before. They have reduced the wasteful habit of routing checks, cheapened domestic exchange operations, made possible the transfer from one part of the country to another of many millions of dollars by means of book credits that would otherwise have required the shipment of currency, and they have therefore reduced the average amount of money continually

tied up in transit. To increase the efficiency of the dollar in these ways is to increase the effective currency supply as truly as to increase the number of dollars. The dollars turn over more rapidly and therefore do more money work.

Most of these non-war causes of inflation represent improvements in our circulation and banking systems. Had it not been for the war the inflation incident to these improvements would have made itself felt more slowly and, being spread out over the whole gold standard world, would probably not have been very serious in its permanent price-lifting effects. The war aggravated these inflationary influences and added many new ones of its own. Let us now turn to the distinctive war causes of inflation.

Although without the war we probably should have experienced heavy losses of gold on net balance during the early period of the operation of the federal reserve act, the war itself reversed this situation and brought us, prior to our own entrance as a belligerent, the largest flood of gold that has ever come to any country within the same length of time in the world's history. The four months, August to November, 1914, witnessed a net exportation of gold of 85.7 millions chiefly in response to Europe's demands upon us for the liquidation of our floating indebtedness to her. In December, however, the tide turned and from August 1, 1914, to April 1, 1917, our total net importation of gold amounted to $1,109 millions. During this same period, namely, approximately the period of the war before our entrance as a belligerent, our merchandise exports exceeded our merchandise imports by $6,054 millions —an average of $189.3 millions a month, as compared with an average of $46.5 millions a month for the fiscal years 1912, 1913 and 1914.

After our entrance into the war, and until the armistice, the change in our supply of monetary gold was negligible. From April 1, 1917, to November 1, 1918, our net importation of gold amounted to only 11.5 millions. During this period we raised still higher our excess merchandise exports, bringing them to $4,850 millions, or an average of $255 millions a month for the nineteen months we were a belligerent. We received, however, most of the compensation that was due us for this excess, in the form of securities, practically none in the form of gold.

The huge supplies of gold that we received during the first thirty-two months of the war were dammed up in the country by the gold embargo which the government maintained from September 7, 1917, to June 10, 1919. During the approximate period of the embargo the total authorized exports of gold were $111.6 millions, but, as we have already seen, the gold exports were almost entirely offset by the gold imports of the same period. For approximately the period since the armistice, namely, from November 1, 1918, to March 10, 1920, we have had a net exportation of gold of 387 millions. Our stock of monetary gold decreased from $3,080 millions on November 1, 1918, to $2,721 millions on March 1, 1920.

One important war cause of inflation, therefore, was an increased supply of monetary gold in the United States throughout the whole period of our belligerency amounting approximately to $1,100 millions, an amount equivalent to 58 per cent of our entire stock of monetary gold at the outbreak of the war.

A second war cause of inflation consisted in the reduction in legal reserve requirements of member banks made through the amendments of August 15, 1914, and June 21, 1917, to the federal reserve act. As a result of these amendments legal reserves against demand deposits were reduced for central reserve city banks from 18 per cent to 13 per cent, for reserve city banks from 15 per cent to 10 per cent, and for country banks from 12 per cent to 7 per cent. Furthermore, all legal requirements for reserves in vaults of the member banks were discontinued, thus making deposits in the federal reserve banks the only legal reserve. For time deposits the legal reserve requirement for all banks was reduced from 5 per cent to 3 per cent. Provision was also made whereby gold held by federal reserve banks as collateral against issues of federal reserve notes should be counted also as part of the gold reserve against these notes—a provision concerning which the federal reserve board said in its fourth annual report: "The effective gold holdings of the federal reserve banks have thus been greatly augmented and their discount power commensurately increased. . . . "[1]

Referring to the table on page 4 and making the same computation for ultimate legal cash reserves under these new re-

[1] Page 11.

quirements that we made for them under the previous requirements, we arrive at the following results: For the central reserve city bank the ultimate legal cash reserve required was reduced from $156,755, representing 10.5 per cent of deposits, to $62,750, representing 4.18 per cent of deposits; for the reserve city bank the reduction was from $132,400, representing 8.8 per cent of deposits, to $50,150, representing 3.34 per cent; for the country bank the reduction was from $108,018, representing 7.2 per cent of deposits, to $37,550, representing 2½ per cent; for all three banks combined the reduction was from $397,173, representing 8.8 per cent of deposits, to $150,450, representing 3.34 per cent.

This was a large reduction in ultimate legal reserve requirements coming as it did less than four years after the great reduction authorized in the original federal reserve act. For the three banks combined the new requirements average only slightly more than one-fifth of the requirements prior to the federal reserve act, and they average less than two-fifths of what they ultimately would have been under the act as originally passed. These reductions were made under war conditions and the public has never fully realized their importance. Whether justified or not by the war emergency—and personally I believe they were excessive—they were a great factor in the progress of inflation.

Rapidly thereafter the ultimate cash reserves declined in the direction of these new legal minima, and they are still tending in that direction. From 1913 to 1919 the average ultimate cash reserve against deposits in our commercial banks (exclusive of bankers' balances) declined as follows:[1] 1913, 11.7; 1914, 11.7; 1915, 11.9; 1916, 10.7; 1917, 10.6; 1918, 7.0; 1919, 6.6. A rough idea of the potentialities for expansion that this reduction involved may be obtained by applying these figures to the amount of net deposits in national banks as of the approximate date of the passage of the second amendment, namely, June 21, 1917.

On June 20, 1917, the net deposits against which a reserve is required, for the banks of the three central reserve cities were $2,825 millions; a reduction of average ultimate legal reserve

[1] See Kemmerer, "Inflation," *American Economic Review*, June, 1918, pp. 253-256.

on this sum from 10.5 per cent to 4.18 per cent would release $178.5 millions of reserve money, which at the 4.18 per cent reserve ratio would be sufficient for a deposit expansion of $4,270 millions.

On the same date the corresponding net deposits of reserve city banks were $2,956 millions. On this sum a reduction of average ultimate legal reserve from 8.8 per cent to 3.34 per cent would release $161.5 millions of reserve money, which at a 3.34 per cent reserve ratio would be sufficient for a deposit expansion of $4,835 millions. For country banks on June 20, 1917, the net deposits amounted to $4,302 millions. On this sum a reduction of average ultimate legal reserve from 7.2 per cent to 2.5 per cent would release $202.2 millions of reserve money, which at the 2.5 per cent reserve ratio would be sufficient for a deposit expansion of $8,090 millions. For all three classes of national banks combined the amount of reserve money released would therefore be $542.2 millions and the potential deposit expansion thereby created, assuming the existence of the gold embargo, would be $17,196 millions.

The fact that similar reductions also applied to numerous state banks and trust companies, which were members of the federal reserve system and which computed their legal reserves on the same or essentially the same bases as the national banks, would greatly increase these figures.

Of course the fact that all banks need some till-money, even though that money cannot be counted as legal reserve, prevents ultimate reserves from reaching the legal reserve minima unless through action of the Federal Reserve Board, the normal legal reserve minima are reduced to meet emergency demands. To a large and increasing degree, however, till money itself is being made up of federal reserve notes which themselves carry a legal reserve of only 40 per cent.

A third war cause of inflation is found in the slackening rate of increase in physical production caused by the war. At such a time production of many kinds of goods is interrupted, economic energies are diverted into new channels involving much waste and lost motion in the readjusting process, millions of men are called from economic pursuits into military and naval service, and the products of industry are destroyed on a tremendous scale. Despite much overtime work, an increas-

ing employment of women and children, the speeding-up of economic activity and the increasing standardization of products, we cannot expect during such a period of storm and stress very much of an increase in the sum total of physical products thrown on the market for purchase and sale.

From 1896 to 1913 we have estimated the increase in the country's physical volume of business to have been roughly about 117 per cent, or approximately 7 per cent a year. Index numbers I have computed for the physical volume of business for the years 1913 to 1919 are as follows: [1] 1913, 100; 1914, 99; 1915, 104; 1916, 109; 1917, 112; 1918, 113; 1919, 109.6.

This gives an average rate of increase from 1913 to 1919 inclusive of only 1.6 per cent.

In this connection it should be noted that during the war the course of products from producer to consumer was often shorter and more direct than it would be in normal times. With a price level unchanged, a given physical volume of business could probably have been carried on under war conditions prevailing in the United States during 1917 and 1918 with a smaller amount of money and circulating credit than in normal times, because the shifting of production to government account shortened greatly the average distance from producer to consumer, and lessened the average amount of exchange or money work required to place a given amount of goods in the hands of the final consumer. On this subject Professor G. O. Virtue said in a recent article: [2]

> The effect of this large scale purchase by the government, often in the early stages of production, and its method of dispensing them without further use of money, by decreasing the rapidity of circulation of great quantities of goods, must have affected the price level in the same way as would a reduction in the amount of goods, or a sudden resort to barter on a large scale, or to a more direct mode of marketing.

The war causes just described created vast potentialities of currency and deposit credit expansion. It was to the financial

[1] For a description of the method of computing these index numbers, see Kemmerer, "Inflation," *American Economic Review*, June, 1918, p. 248, footnote 1; also, Kemmerer, "Inflation," *The Bankers Statistics Corporation Service*, December 4, 1919, p. 1.

[2] "Another Reason why War Prices are High," *Quarterly Journal of Economics*, August, 1919, pp. 729-733.

interest of the government, the business public, and the banker to turn these potentialities into actualities by taking advantage of the powers of expansion thus created. One of the most important factors in this process was the government's war policy of depending extensively on loans for financing the war and of floating these loans in vast quantities at rates of interest much below market rates by means of appeals to war patriotism chiefly through great loan drives, during which the public were encouraged to borrow of the banks and to buy bonds to the limit of their borrowing capacity.

Buyers of Liberty Bonds could usually borrow of their local banks the money necessary for purchasing the bonds at the same rates of interest that were paid by the bonds, depositing the bonds as collateral for their loans. Inasmuch as small margins —in some cases practically none at all—were required by banks on these loans, the interest received on the bonds practically paid the interest due the banks on the purchaser's note. The fact that the funds paid to the bank for the government's account on such bond sales were usually left as a government deposit at the bank for several weeks at the low interest rate of 2 per cent, without the requirement of any reserve against the deposit, usually made the operation a profitable one to the bank. When later the government called upon the banks for the funds the federal reserve bank was ready to lend to the banks the funds necessary for meeting the government's call, and to do so at a rate of interest lower than that being paid to the bank by their bond-buying customers, accepting as collateral at par the customers' notes with the bonds attached as collateral or rediscounting those notes. This procedure lodged the bonds with the federal reserve banks releasing against them federal reserve bank deposits or federal reserve notes, the latter being obligations of the government—a process which expanded the federal reserve bank's liabilities, both deposit and note, and tended to force continually downward the federal reserve bank's percentage of reserve.

If the buyer of the Liberty Bond did not forthwith curtail his expenditure on other things—and reduce his loan at the bank—and in all too many cases he did not—the ultimate result of this series of operations was inflation and practically nothing more. The borrower went on consuming goods as be-

fore, competing with the government for the country's limited supply of labor and capital; the local bank went on lending as before because its loan to the Liberty Bond buyer had not appreciably curtailed its loanable funds; the government had more funds than before but there were no more goods thereby created or made available by the bond buyer's economies for the government's war needs. The federal reserve bank, however, had expanded its liabilities and reduced its ratio of reserves to deposits and outstanding federal reserve notes. Under the pressure of the increased purchasing power in the forms of circulating bank deposits and federal reserve notes thus thrown on the market to be used in competition for the pre-existing supply of goods, the price level was rapidly forced upward.

During the entire period of our participation in the war and during most of the time that has elapsed since the armistice, discount rates at the twelve federal reserve banks have been maintained below the market rate for like paper.[1] "The market has been in the Federal Reserve Bank." For most of the time the federal reserve banks offered preferentially low rates for loans collateraled by war paper. Patriotism and pressure from Washington led the banks to make heavy purchases of certificates of indebtedness for their own account. The result has been that both the member banks and the federal reserve banks have been loaded up with war paper, at times carrying upwards of seven billions of dollars of the government's debt.

Our heavy net exportations of goods to Europe during the war resulted in large receipts of European securities. These securities in substantial quantities were hypothecated at our banks and served as a basis for further currency and credit expansion.

It was some time before the potentialities for credit expansion which were being created in the manner above described made themselves felt in a rising price level. There was no appreciable increase in general prices from the outbreak of the war until the fall of 1916. From that time until the armistice the general tendency of the price level was strongly

[1] See E. W. Kemmerer, "Rediscounting and the Federal Reserve Discount Rate," *Journal of the American Bankers Association*, April, 1920, pp. 582-584.

upward. There was a slight reaction at the time of the armistice but since February, 1919, the upward movement has again been pronounced and is continuing to this day. At the present time our price level, as measured by the Bureau of Labor Statistics Index Numbers, is approximately 150 per cent higher than it was in July, 1914, or in the fall of 1915. There is always a lag between the time of currency and credit expansion and the rise in the price level—a lag which is largely responsible for the scarcity of goods of nearly every kind *at current prices.* A study of this lag is one of the most interesting statistical problems now before economists.

The conclusions of this paper may be summarized briefly as follows: There have been two groups of causes for the inflation we have experienced—non-war causes and war causes. The chief non-war causes were the large gold production that preceded the war and continued during its early years, and the changes in our currency and banking system that would have resulted from the carrying out of the provisions of the federal reserve act as originally enacted. Among these changes the principal ones making for inflation were the reduction of reserve requirements for member banks, the introduction of the federal reserve note, and the organization and development of the federal reserve clearing and collection system, including the gold settlement fund. These currency and banking changes that would have taken place under the federal reserve act as originally enacted, even had there been no war, would have resulted in considerable inflation, but the effects of this inflation on the price level would have been felt more slowly and nothing like to the same extent, partly because they would not have been speeded up by war pressure and partly because the supply of gold released by these improvements in our American currency and banking system would have been spread out thinly over the entire gold-standard world, instead of being dammed up in this country.

The chief war causes of inflation were the heavy net importations of gold into this country resulting from Europe's unprecedented demands upon us for war supplies, the gold embargo, the great war-time reductions made in legal reserve requirements of our national banks and of many other member banks, the extensive resort by the government to loans for

financing the war, particularly loans at artificially low rates of interest that were floated largely by the aid of very low discount rates at the federal reserve banks for war paper, and by the aid of undue encouragement of the public to borrow and buy. This policy placed vast sums in the hands of the government but did not increase the physical supply of goods which the government was so urgently needing. It, however, gave the government an advantageous position in the competition for goods that were being produced, because it gave the government almost unlimited funds and by forcing up prices at a rapid rate compelled rigid economies on the part of that large proportion of the public whose incomes either remained practically constant or increased much less rapidly than did the cost of living. This released labor and capital for the production of war supplies, but it placed the economic burden of the war very unequally and very inequitably. The slackening of the usual rate of increase of physical production because of war-time readjustments and because of the depletion of our labor force, the more direct routing from producer to consumer of the goods produced, the wholesale destruction of the products of industry, and the speeding-up of the rates of monetary and deposit currency turnover, all contributed their part to the war-time inflation.

We won our independence nearly a century and a half ago in a war financed predominantly by paper money inflation, we maintained the Union a half a century ago by a war financed extensively by paper money inflation, we have just preserved our political heritage by a war financed in the United States largely by deposit currency inflation, and yet we nearly all condemn inflation as a most inequitable method of financing a war. The great difficulty has been and, I fear, will continue to be, that financing a war by inflation, with all its injustice and with its necessary aftermath of economic and social problems, is none the less both politically and economically, during the war itself, the line of least resistance.

TREASURY METHODS OF FINANCING THE WAR IN RELATION TO INFLATION

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I

Financing the War

THE Treasury's war problem was to meet the financial requirements of the Governments of the United States and the Allies promptly and without stint, and to meet them so far as possible from the saved incomes of the people, avoiding avoidable inflation. These objectives must be pursued in such ways as would not interfere with, but on the contrary facilitate, the mobilization of the nation for war purposes and the production and transportation of munitions and supplies. It was necessary that the Treasury should reach its determinations without the possibility of knowing the duration of the war or, consequently, the magnitude of the ultimate financial effort which the country would be called upon to make. The Allies had about reached the end of their tether because of their dependence upon imports for an important part of their munitions and supplies. They had nearly reached the limit of their ability to finance these through private channels in America and the neutral world. The Central Empires, more self-contained in fact and aided by the blockades maintained by the Allies, appeared to be less subject to the risk of economic breakdown. The United States, the last great nation to enter the war, was also the last great reservoir of available wealth which could be tapped in the Allied cause. If America failed to meet the financial and economic demands upon her, the war was lost.

For about a year after our declaration of war our loans to the Allies were our principal effective contribution to winning the war which they were fighting. During the first six months the loans we made to Russia and the knowledge of our willingness to make further loans kept Russia in the war and held the eastern front. The loan we made to Italy in the fall of 1917,

when the great offensive broke on Italy, gave the Italian people courage and enabled Italy to replace the lost munitions and supplies. In the spring of 1918 our silver helped hold India effective for the Allies.[1] In the summer of 1918 American credits sustained the French when Paris itself was under gunfire.

As our military effort grew, the demands of our own army and navy in large measure displaced those of the Allies in respect to American production and transportation, and the burden which the Treasury had to bear came increasingly to represent the expenditures of our own Government and decreasingly those of the Governments of the Allies. The rapidity with which our financial and economic resources were mobilized made possible the termination of the war a year sooner than had been hoped by the most optimistic. Our military and economic effort was, I believe, planned to reach the peak in the spring or summer of 1919. Though hostilities ceased on November 11, 1918, the Treasury was called upon to meet expenditures to the average amount of about $2,000,000,000 a month in November and December, 1918, and January, 1919—the full amount of the First Liberty Loan each month. The peak of the war debt was not reached until August 31, 1919 (when the floating debt amounted to about $4,000,000,000, and the total gross debt amounted in round figures to $26,596,000,000), and it was not until January, 1920, that the Treasury was able to reduce the floating debt to manageable amount and maturities.

In the period, lacking six days of three years, from the declaration of war to March 31, 1920, on the basis of Treasury daily statements, excluding transactions in the principal of the public debt, the Government's current expenditures amounted in round figures to $37,455,000,000 and its current receipts to $14,198,000,000, the difference being covered by a net increase in the public debt of $23,257,000,000. On March 31, 1920, the

[1] "The timely help thus rendered by the United States Government in placing at India's disposal a supply of silver which represents considerably more than the world's annual mine production since 1914, enabled the Government of India to tide over a very serious currency crisis and to maintain the convertibility of the note issue." *British White Paper*, Cmd. 527, 1920, page 11. Report of the Committee appointed by the Secretary of State for India to enquire into Indian Exchange and Currency.

gross debt had been decreased by about $1,900,000,000 to $24,698,000,000 from taxes and salvage, including in the latter item the reduction of the net balance in the general fund made possible by the reduced ordinary and public debt disbursements. Though the current months of April and May will show an important increase in the public debt, in large measure due to the heavy burdens thrown upon the Treasury in connection with the return of the railroads to private control, the Treasury is hopeful that the ground lost in the first two months of this last quarter of the fiscal year will be regained in June when another installment of income and profits taxes is payable, and that the end of the fiscal year on June 30, 1920, will show a reduction in the gross debt of somewhere near $1,750,000,000 from the peak in August, 1919, and that the operations of the whole fiscal year will show a decrease in the gross debt of some $600,000,000 which is more than accounted for, however, by the decreased balance in the general fund. This means that for the fiscal year beginning seven months after the cessation of hostilities, three days after the signing of a peace treaty which is still unratified by America, and two months before the peak of the war debt was reached, the United States should balance its budget within a couple of hundred million dollars—current receipts against current expenditures.

The total disbursements of $37,455,000,000 include expenditures for loans to the Allies and obligations taken from the Allies and other Governments upon the sale of goods on credit in the aggregate amount of, say, $10,000,000,000, and in addition several billion dollars worth of more or less salvageable investments. To what extent and with what degree of expedition these investments may be liquidated depends upon questions of public policy as well as practical finance.

The most rigid economy in Government expenditure should be enforced, adequate revenue from taxes should be provided and rigorous salvage methods adopted with a view to the rapid retirement of the floating debt and of a portion of the Victory Loan before maturity. If due progress is thus made in reducing the floating debt, Victory Notes should be accepted at par in payment of the five income and profits tax installments falling due in the calendar year 1922 and the first quarter of the calendar year 1923; or if the notes are then selling at or above

par, a portion of them should be called for redemption in June and December, 1922. This would raise the level of all other Government securities and make possible the refunding of the reduced balance of the Victory Loan upon terms advantageous to the Government.

These measures are feasible and necessary. If, however, we reduce taxes, increase expenditures and delay salvage operations, the Government's financial predicament will be grave, for the debt outstanding and maturing within three years amounts to some $8,000,000,000.

The maturities and redemption dates of the Liberty Bonds and Victory Notes were arranged conveniently for the retirement of the public debt. The sinking fund will retire the entire funded war debt (over and above the amount of obligations of foreign governments held by the United States) within less than twenty-five years if, say, $1,250,000,000 a year is provided for the service of the debt, including interest and sinking fund.

II

The Treasury's Methods

The methods pursued for accomplishing these results were intended to and did hold the inevitable war inflation in this country down to a minimum. There are three ways of financing Government expenditures: taxes, loans and paper money. The last and worst of these methods was resorted to, to a greater or less extent, by all the European belligerents, and, to a disastrous extent, by some. It was avoided in the United States as a means of meeting the Government's war expenditures. The Government did not issue paper money; nor did it borrow directly from the Banks of issue except (a) temporary borrowings for a day or a few days at a time which were promptly repaid by withdrawals from depositary banks or out of tax receipts, and (b) certificates sold to Federal Reserve Banks under the Pittman Act as a basis for the issue of Federal Reserve Bank notes to replace silver withdrawn from circulation and sold to the British Government for India. There have been a few instances of purchases of Treasury certificates of public issues by one or more of the Federal Reserve Banks but these have been in such small amounts and of such brief duration as to be negligible.

Taxation. The Treasury persistently and, on the whole, successfully insisted that one-third of the current war expenditures should be met from current taxes. The effort to go further would probably have defeated itself and made the speeding up of production for the winning of the war impossible. When tax rates are low, the inequalities, injustices and economic injuries from errors in the incidence of taxation are slight enough; but as rates go higher their consequences become graver. The income of the business man in a period when the demand is for increased production ought to be turned back into his business. The income of the *rentier* ought to be taken up to the point where the most rigid economy in personal expenditures would be enforced. As a practical matter the distinction cannot be made, so we impose taxes as high as we dare upon both and seek to take the surplus income of the *rentier* by loans.

The first War Revenue Act became law on October 3, 1917, about six months after the declaration of war. Six months later it became apparent to the Treasury that war expenditures were mounting very rapidly and, immediately after the Third Liberty Loan the Treasury took steps to obtain additional revenue from taxation, demanding $8,000,000,000 in taxes against a rough estimate of $24,000,000,000 of expenditures. The proposal was resisted bitterly by leaders of both parties in Congress, who were anxious to adjourn for the summer and were looking forward to a general election in the fall. The issue was laid before the President, who, after careful consideration, sustained the Treasury and on May 27, 1918, delivered a special message to Congress demanding an increase of taxes. After months of delay the House passed a bill estimated to produce $8,000,000,000 of taxes, but this bill was still before the Senate Finance Committee when the armistice was signed. The Treasury, three days after armistice, reduced its estimates of expenditures for the fiscal year from $24,000,000,000 to $18,000,000,000 (a figure which proved to be correct within a few hundred millions of dollars) and advised the reduction of the taxes to be carried by the pending bill from $8,000,000,000 to $6,000,000,000 for the current year and $4,000,000,000 for subsequent years. These recommendations were ultimately adopted in the second War Revenue Act, which did not, however, become law until February 24, 1919.

The Treasury's tax policy measurably limited the inflation inevitably incident to the war. But we must not assume that to the full extent that Government expenditures are met from taxes inflation is avoided. There are good and bad taxes. Congress gave effect to the demands of the Treasury as to the amount of revenue required, but the House of Representatives and the Ways and Means Committee of that House are very jealous of the right and duty which they believe to be theirs to initiate revenue measures. The Treasury was consulted and given the most courteous consideration and the fullest opportunity to express its views, but the tax bills were written in Committee and the Treasury's views were overruled in many important instances.

The Treasury, though favoring and indeed urging the war profits tax as a tax upon profits roughly attributable to the war, strongly opposed the excess profits tax as a tax upon profits in excess of a given return upon invested capital. Experience has shown, what the Treasury always asserted, that the excess profits tax discourages initiative and enterprise, rewards overcapitalization and discourages conservatism in capitalization, confirms great corporations in their monopolies, encourages extravagance and wasteful management, and adds to the cost of living.

Similarly the Treasury advised against excessive rates of surtax and urged heavier rates of normal tax. Excessive surtaxes do not produce revenue but drive capital into the billions of exempt securities; and the manufacture of additional amounts of exempt securities is stimulated by the very existence of these high surtax rates. This encourages wasteful or deferable expenditure by States and municipalities at a time when the worldwide shortage of capital makes it urgently necessary that our capital resources be conserved for productive business. Graduated surtaxes are necessary and desirable socially, but, particularly where there exist billions of dollars of securities carrying exemption from these taxes, excessive surtax rates defeat their own ends and, in the last analysis, the burden is shifted to the community as a whole because of the consequent shortage of capital for useful and necessary purposes.

The departure from the Treasury's views concerning surtaxes and normal taxes has seriously impaired the market value of

Liberty Bonds, which are exempt from the normal taxes but, with certain exceptions and limitations, subject to surtaxes. It is within the power of Congress, by reducing surtaxes and increasing normal taxes, to lift Liberty Bonds to practically any market level it chooses.

In the last analysis, taxes can only be paid out of income, and the best tax is a properly graduated income tax. When a tax is imposed upon something else, or measured in some other way, the taxpayer who has not current income available must shift the burden to some one else. If possible he will shift it to the ultimate consumer. Capital taxes, including retroactive war profits taxes, and excessive surtaxes, excess profits taxes and sales taxes—all these must be shifted sooner or later—after much economic disorder in some cases—if possible to the consumer. Because the whole income of the poor man is spent on things he consumes, and the greater part of the income of the man of modest means but a neglible part of the income of the rich man, taxes of this sort are unjust and unnecessarily burdensome. There is an even greater evil in these indirect taxes and that lies in the fact that Congress is perpetually urged to make expenditures out of the public purse for the benefit of some class or group in the community. A system of indirect taxation makes it possible to conceal from the great mass of the voters upon whom the burdens fall the fact that they are being mulcted in order to confer special benefits upon a part of the community. The notion that in some mysterious way the other fellow will pay, the profiteer or the plutocrat,—or perhaps the general public without knowing it—leads to wasteful expenditure.

Thus the beneficent effects of the Treasury's policy, to pay as we go one-third of the war expenditures from taxes, were limited by the character of the taxes imposed. Inflation was avoided to an important extent because the spending power of the individual was curtailed and transferred to the Government without the issue by the Government of credit instruments. The full value, however, of these measures was not obtained because certain of the taxes imposed tended to dissipate or penalize capital and inflate prices.

Liberty Loans. When the war began the investment bankers of the country had, it is said, sold bonds of all kinds to some

four hundred thousand persons. The Treasury grappled with the problem of loans boldly, relying upon the patriotism and capacity for self-sacrifice of the American people; it devised a sound plan of decentralized organization for mobilizing the financial resources of the country; and it promptly drew into its headquarters staff experts from the business and financial world, who under the Secretary gave to the fine old Treasury organization the necessary leadership for solving the problems of the war.

The Sixty-fifth Congress convened on the 2nd of April, 1917, war was declared on the 6th, and the First Liberty Loan Act was approved on the 24th. It was the third Act passed by the Sixty-fifth Congress, being preceded only by two deficiency appropriation bills. Bankers differed in their opinions as to the amount of bonds which could be sold, some believing that the amount might run as high as $1,500,000,000, others that it must not exceed $500,000,000. The Treasury asked $2,000,000,000 and the loan was oversubscribed fifty per cent. The Treasury avoided conventional methods of bond selling, paid no commissions, employed the Federal Reserve Banks as fiscal agents, and called upon the leaders in the banking and business world in every community to form Liberty Loan Committees and lead the movement. In organization it pursued a policy of decentralization, vesting leadership in the Governors of the twelve Federal Reserve Banks and in committees appointed by them.

The First Liberty Loan not only filled the Treasury for the moment but it prepared the American people for the draft and made them realize the war. It taught millions of them what a bond is and how to save and pay for one.

Fom May, 1917, to May, 1919, the country was thrown by the Treasury every six months into the throes of a Liberty Loan campaign—five loan campaigns in two years. It is estimated that 20,000,000 people or more subscribed for some or all of the loans, and that 2,000,000 people took part as workers in one or all of the campaigns. During these two years, covering the whole period of our participation in the war and six months after the fighting stopped, no one in America was ever allowed to forget that there was a war, that he had a part in it, that that part included buying Liberty Bonds or Victory Notes, and that

to do it he must save money. In the history of finance no device was ever evolved so effective for procuring saving as the Liberty Loan campaigns. Every one was always buying a Liberty Bond or Victory Note, or trying to pay for one or getting ready to buy bonds or notes of the next issue. The First, Second, Third, Fourth and Victory Loan campaigns stand out in my mind as the most magnificent economic achievement of any people. For conception, direction and detail the Treasury is entitled to credit and must assume responsibility, but for the actual achievement of 100,000,000 united people inspired by the finest and purest patriotism no man or group of men could be so foolish as to imagine themselves responsible. Those Liberty Loans were the principal instrument in raising cash and getting the people to save for the war.

In fixing the terms of the loans the Treasury had always one major consideration in mind, and it perhaps accounts for some divergence of opinion between the Treasury and some of the bankers. It was not from a wilful desire to make the sale of bonds hard, but from a determination to finance the war so that it should never be lost for financial reasons, that the Treasury sold long bonds, and sold bonds at low rates of interest. There must never come an end of the war in defeat because of lack of foresight, lack of courage to take the first steps in a careful, thoughtful way, looking to the possibility of a long war. In addition to the effect of high rates of interest and short maturities in depreciating other securities and in causing apprehension as to the future, must be kept in mind the psychological effect at home and abroad.

As to maturity the experience of the Governments of the Allies showed conclusively the grave embarrassment which must confront any Government in the course of a long war which failed to place long-time bonds. The theory that short bonds would keep themselves at par has not been sustained in practice. Very much the highest interest bases have been established by the short bonds and notes of this and other governments. The explanation is simple. When bonds are sold, to the accompaniment of patriotic appeal, to an amount in excess of the normal investment demand, subscribers who have overbought sell first the bonds which they can sell with the least loss of principal. They do not bother much about the interest

basis. And permanent investors who do not expect to follow closely market fluctuations, in buying Government securities prefer a good return for a long period to a higher return for a short period.

Given the necessity of selling bonds of long maturity, it was undesirable to burden the country with a high interest rate for a long period of time with the moral certainty that very high interest rates would drive the bonds to a premium long before maturity. But above all, the Treasury must give ground slowly, remembering that the limit of the task was not in sight and that the credit of the Government of the United States was the last financial resource of the Allies. We were engaged in war, not conducting a commercial operation. Indeed there was no rate of interest which would float several billion dollars of Liberty Bonds or Notes as a commercial operation.

But the bankers differed as much with each other as with the Treasury, and I do not recall any instance when there was any considerable opinion in favor of a rate in respect to any Liberty issue more than one-quarter of one per cent higher than the rate actually adopted by the Treasury. A comparison of the present opinions of some financiers and publicists with those expressed during the war, and of record in the Treasury, would furnish amusing reading.

When the Treasury fixed the terms of the Victory Loan I was told by a banker, who is second to none as an expert in the distribution of securities, that they were unnecessarily attractive. A leading newspaper criticized the issue bitterly on the same ground. The attractiveness of the issue was proclaimed by the financiers of the country with such unanimity that serious apprehension was aroused lest the people at large should get the impression that the Victory Notes were so attractive that they might leave them safely to the bankers and business men and that no subscriptions involving self-denial on their part were necessary to assure the success of the loan. The head of the Publicity Bureau of the Liberty Loan Organization, after a tour of the country, told me that the Treasury had jeopardized the success of the loan and destroyed the patriotic appeal by offering notes upon such attractive terms. Federal Reserve authorities became very apprehensive lest the banking institutions of the country should subscribe heavily for their own ac-

count, and the Treasury and the Governors of the Federal Reserve Banks were hard put to it to prevent their doing so. Recently the 4¾% Victory Notes have sold on an interest basis as high as 6¼%.

The rates of interest determined upon by the Treasury were at the time fair rates for the Government to pay, having regard to the exemptions from taxation which the bonds and notes carry, their maturity and the purpose for which they were issued. No one could foresee the probable course of the market for the bonds and notes in the immediate future with any degree of confidence. A year ago it was freely predicted by financial authorities that Victory Notes would shortly go to a premium and that Liberty Bonds would be selling at or near par within a year or two.

Every one knows why these sanguine expectations have not been realized. With the armistice, and still more after the Victory Loan, our people underwent a great reaction. Those who had bought Liberty Bonds as a matter of patriotism, but not as investors, began to treat their bonds as so much spending money. Those who had obeyed the injunction to borrow and buy Liberty Bonds ignored the complementary injunction to save and pay for them. A $50 bond in the hands of a patriot turned spendthrift was to him a $50 bill to be spent Saturday night, or, to her, a new hat, and if the $50 bill turned out to be a $45 bill, small matter. This was the first and most immediate cause of the depreciation of Liberty Bonds, affecting them particularly. I shall mention later other conditions affecting the general situation and them incidentally.

I doubt whether higher rates of interest on Liberty Bonds, which would have meant more taxes for the taxpayer and more spending money for the bondholder, would have had any other effect than to increase the inflation which has been rampant since the Victory Loan.[1]

[1] "Some people argue that a low rate of interest makes people save more because it is necessary for them to save more in order to acquire independence. Others maintain that a high rate of interest induces people to save because they can see the direct advantage of doing so. Both these arguments are probably true in some cases. But, as a rule, people who have the instinct of saving will save, within certain limits, whatever the rate of interest may be. When the rate of interest is low they will certainly not reduce their saving because each hundred pounds that they put away brings

Some critics say that the Treasury should have foreseen the after-the-war reaction and, in order to protect bondholders from the consequences of their own acts, issued the bonds and notes at rates of interest which would insure a market price for them at or near par even in the period of reaction.[1] These were counsels of despair, inflationist doctrine and futile. The bonds and notes were never meant to be treated as spending money. The Civil War gave us our fill of interest-bearing currency. Depreciation in market price serves as a check upon those who wish to spend their bonds.

There was no plan of financing the war or of financing the period of readjustment which would protect the holders of the Government's securities or the Government's credit against subsequent folly and waste.

War Savings. The Liberty Loan campaigns were supplemented by the work of the War Savings Organization, which disseminated sound economic doctrine and produced about a billion dollars.

Treasury Certificates. By selling Treasury certificates in anticipation of each Liberty Loan and of income and profits tax installments the Treasury provided current funds to meet outgo, made provision against the money strain which would have been involved if Liberty Loan and tax installments had been paid on one or several days without anticipatory borrowing, and, more important in economic effect, tapped the credit

them in comparatively little, and when the rate of interest is high the attraction of the high rate will also deter them from diminishing the amount that they put aside." — Hartley Withers, *War-Time Financial Problems*, page 7.

[1] "If there is a great reaction, and everybody's one desire is to throw this nightmare of war off their chests and go back to the times as they were before it happened, then all that the war has taught us about the production of capital will have been wasted. But I rather doubt whether this will be so. Saving merely means the diversion of a certain proportion of the output of industry into the further equipment of industry. The war has taught us lessons which, if we use them aright, will help us to increase enormously the output of industry. . . . There is a further point, that the war has taught a great many people who never saved at all to save a good deal. . . . The war has shown us how we can, if we like, increase production, reduce consumption, and so have a larger margin than ever before to be put into providing capital for industry. Whether we really have learned these lessons and will apply them remains to be seen."—*Ibid.*, pp. 9-10.

resources of the banks and trust companies of the United States and mobilized them for the uses of the Government, thus limiting commercial inflation during the period when the Government was the principal buyer and needed to have the credit resources of the country placed at its disposal.

The Treasury issued as great and as frequent long loans as the market could absorb—in fact, greater and more frequent than the market could absorb. The point of saturation for long Government loans had been reached—and passed—with the Fourth Liberty Loan. Investors require diversification of their investments. In a little over two years we created $25,300,000,000 of debt (at the maximum). It was bad enough to ask the people to absorb that amount of the obligations of one Government. It would have been intolerable to insist upon their buying only bonds of one character, that, is, long-time bonds. After armistice the only way to get additional investment money into Government securities was to offer some diversification of terms and this was done by issuing Victory Notes and thereafter by revolving Treasury certificates.

The result of forcing out more long loans would have been the perpetuation of the war debt. There is no greater influence towards economy of expenditure and maintenance of adequate revenue than the existence of short dated debt. No Administration could have resisted the pressure for reduction of taxes and increase of expenditures if the war debt at its maximum of $25,300,000,000 had been funded, and it had subsequently appeared that taxes and salvage would more than meet current expenditure. The time to pay off a war debt is immediately after the war.[1]

During the war Treasury certificates were sold largely to banks in anticipation of loans and to taxpayers in anticipation of taxes. Since the Victory Loan campaign efforts to procure distribution of both tax and loan certificates among investors have been increased and marked success has attended them. The banking institutions of the country have been asked to buy the certificates and sell them to their customers, and their fine efforts to that end have been supplemented by the Treasury mailing circulars describing each issue of certificates to a

[1] *Report of the Committee on War Finance of the American Economic Association*, December, 1918, page 84.

selected list of taxpayers and bondholders of the United States. The success of these efforts is evidenced by the fact that on April 16, 1920, of $2,693,808,500 loan and tax certificates outstanding only $462,114,000 were pledged with Federal Reserve Banks as security for loans and discounts. In view of the fact that the Reserve Banks were maintaining a preferential rate for paper so secured, it is safe to assume that the remaining $2,-231,000,000 certificates were in the hands of investors, including banks which were not borrowers.

War Loan Deposits. Technically the Treasury's special depositary system is one of the most interesting, as it is one of the most valuable, devices for financing the war. Our problems were different from those of European countries. We had to deal with some thirty thousand independent banks and trust companies scattered all over the United States. The device of "payment by credit" was worked out in connection with the First Liberty Loan at a Sunday conference in May, 1917, between representatives of the Treasury, of the Federal Reserve Board and of the New York Liberty Loan Committee. Unchanged in principle from that day to this, but simplified and perfected in the course of three years, it served to weld together and mobilize for war the banking resources of the United States, including in the Government's depositary banking system ten thousand of the thirty thousand banking institutions of the country.

"Payment by credit" is a device for permitting the banking institutions which purchase Government securities to defer payment for them until the Government actually needs the money. It was adopted to prevent money stringency. It developed the further advantage that in the difference between the rate borne by the securities and the rate charged on the deposit, banks found some compensation for their time, trouble and the loss of deposits resulting from the sale of securities to investors. If, instead of permitting the banks to make payment by credit, the Treasury had required them to make payment in cash and held the cash, it is apparent that the operation simply could not have been carried out. A very modest increase in the balances in Treasury offices involves money strain. The attempt to make payment into Treasury offices in cash on one day of the proceeds of the smallest war issue of Treasury certificates—not

to mention a Liberty Loan or tax payment—would have created a panic. Bankers and the public have become so accustomed to the ease and smoothness with which Treasury operations are conducted that they take them for granted; yet two years ago the business and banking community was in an uproar because of the fear of money strain in connection with the first great income and profits tax payment—a strain which never occurred because the Treasury's arrangements to deal with the situation were so complete.

"Payment by credit" was well calculated to limit inflation incidental to war borrowing. If, instead of permitting the banks to make payment by credit, the Treasury had required them to make payment in cash and had then redeposited the proceeds, to the extent that it did not require to make immediate use of them, it would have pursued a course more likely to create inflation. If the Government were to draw into the Reserve Banks and the Treasury offices cash in excess of its current requirements, the first effect would be to make money very tight and increase money rates, with consequent interference with the Government's financial operations. The second effect would be heavy discounts by the Reserve Banks to meet the demands so artifically created. Discounts so made would be for periods from one to ninety days. Upon the redeposit of the proceeds of certificates depositary banks would be put in possession of loanable funds.

It was better to make one bite of the cherry and to avoid the money strain and inflation which would have been inevitable if the money had been first drawn out of the banks and then redeposited with them.

In order to sell Liberty Bonds and Victory Notes it was necessary to give subscribers the option of making immediate payment in full or of making payment in installments over a period of months. This injected an element of great uncertainty into the Treasury's calculations. It was quite impossible precisely to anticipate receipts under these circumstances. As a matter of fact the privilege of making payment in full on the opening day was largely availed of and the Government's balances were consequently swollen until certificates of indebtedness issued in anticipation of the loan matured or could be called for earlier redemption. Redemptions were made as promptly as possible,

but the operations were on so huge a scale that it was a matter of two weeks after a loan-payment date before the Treasury could obtain really reliable information as to the amount of the payment.

The same principle (payment by credit) was employed in handling the great tax payment in June, 1918, (which was only about half covered by anticipatory borrowing) although not called by that name and modified necessarily in detail. Checks received, drawn on qualified depositary banks, were forwarded to them and the amount credited by them in the War Loan Deposit account. This was done instead of collecting the checks and redepositing the proceeds. Subsequent income and profits tax installments have been covered by anticipatory tax certificates.

A similar problem, though not of such great dimensions, presents itself in connection with the current routine business of the Government under war and armistice conditions. The ideal thing would be to have the Government's receipts precisely equal its expenditures from day to day. That ideal, however, being impossible of attainment, the Treasury has consistently pursued the policy of borrowing sufficiently in advance to meet its requirements, without direct borrowing from the Federal Reserve Banks. The Treasury plans to sell certificates to an amount sufficient to cover the estimated requirements for some three weeks in advance. This is a small margin of safety in view of the impossibility of estimating closely. It is physically impossible to issue Treasury certificates more frequently than every two weeks and it takes ordinarily two weeks from the date of the offering of an issue of Treasury certificates to the date of closing the issue for the ascertainment of its results. Sometimes it happens that the Treasury miscalculates its cash requirements and borrows in excess of the amount which turns out to be actually necessary at the time. That happened last September. Sometimes it underestimates its requirements. That happened only last month. Indeed, it is very much more difficult to gauge the current income and outgo now than it was during the period of active warfare. Expenditures increased at the rate of about $100,000,000 a month pretty regularly during the war. The physical limitations upon production and transportation prevented expendi-

tures increasing by leaps and bounds—imposed a certain sobriety upon them. There has been no similar brake upon the decrease since the armistice. In consequence of settlements of contracts and sales of accumulated stores, receipts and expenditures have jumped about in such a way as to make them utterly impossible of calculation. The Treasury has no control over the expenditures or salvage operations of other departments.

A depositary bank, when it makes a "payment by credit," does not put itself in possession of loanable funds. What actually happens is that the bank becomes possessed of an asset, to wit, Treasury certificates and is charged with a liability, to wit, an entry in the Government's war-loan deposit account. It does not have any money to lend or spend until it sells the certificates or borrows on them. Like most human devices, payment by credit may be subject to abuse as, for instance, by the application of the proceeds of sale or borrowings on the certificates to other purposes than meeting the Government's calls, but the Governors of the Federal Reserve Banks, under the wise guidance of the Federal Reserve Board, have been alert to prevent such abuse.

The view that bank deposits are potential currency [1] is inapplicable to the deposits created in the Government's war loan account. No checks are ever drawn upon or charged against the Government's war-loan deposit account with depositary banks. Remittances are made by them to Reserve Banks on receipt of letters or telegrams. The number and amount of United States Government disbursing officers' checks outstanding or in process of collection at any given moment of time is not affected by the amount of the Government's deposits in depositary banks. The Treasury has no control over the drawing of these checks and the credit of the Government of the United States has at all times been sufficient to float them regardless of its bank balances. These checks have involved

[1] "As many people may be puzzled by the assertion that the Government increases the currency by borrowing from banks, it is better to explain the process briefly here, though in another book I have already shown how loans made by banks produce manufactured money by adding to the banks' deposits, which embody the right of their customers to draw the cheques which are the chief form of currency that we now use." — Hartley Withers, *Our Money and the State*, page 61.

an important expansion of currency (treating checks as currency). The Treasurer of the United States handled as many as 300,000 checks in one day during the war. He is now handling something like 80,000 checks a day. The Treasury has struggled to keep enough money in the bank to meet these checks as they come in, but the checks have been floated not on the faith of its bank deposits but on the general credit of the United States Government.

Collateral Agencies. During the war many collateral agencies were created to conserve and mobilize the resources of the country and limit the inflation of prices and the expansion of currency and credit. Some were initiated by, others were quite independent of, though acting in coöperation with, the Treasury. The Capital Issues Committee discouraged issues for non-essential purposes. The Subcommittee on Money of the New York Liberty Loan Committee fixed the price of call money and rationed credit to the stock market. The Division of Foreign Exchange of the Federal Reserve Board licensed imports and exports of gold, silver and capital. The War Trade Board licensed imports and exports of commodities. The War Industries Board fixed prices and priorities for commodities. The Shipping Board, the Food and Fuel Administrations and the Railroad Administration, were all parts of a comprehensive plan for mobilizing the resources of the country.

It was impossible to rely upon prices and rates to prevent inflation at a time when the first duty was the winning of the war. When the Government requires the services, the wealth, the productive capacity of all the people for the purposes of a great war it must practically go through a process of condemnation and pay a price determined by properly designated functionaries. The laws of supply and demand cannot be allowed to function in war times so as to permit some of the people to extort from all of the people, represented by their Government waging a righteous war, prices, whether for commodities or credit, based upon the fact that the supply is very limited and the demand for all practical purposes unlimited.

When the fighting was over most of these controls were broken down one by one as rapidly as seemed possible, with a view to restoring natural conditions.

III

Inflation

Before the War. Before we entered the war we had what, for lack of a better short description, may be called, though inaccurately, gold inflation.

During the War. Currency expansion, as distinguished from credit expansion, has been very moderate in this country.[1] The Treasury has not manufactured currency at all. It has not manufactured credit directly with the banks of issue. It has limited the expansion of credit as far as practicable. The expansion of currency and credit which has taken place has been the result not of Treasury methods of financing the war but of the unlimited buying power of the Government of the United States when supported by the devotion of the people. Government expenditures and commitments were the cause of price inflation, rather than the methods which the Treasury employed to meet those expenditures. Expenditures and commitments always outran the provision made for them by the Treasury, whether in cash or credit. Government contracts covered future production for months or years ahead, but the Treasury never during the whole period of the war had provided money or bank credit sufficient to meet its requirements for more than a few weeks ahead. Prices rose in response to the effective demand of the United States Government sustained by the general credit which its resources and taxing power and the devotion of one hundred million people gave it. They were influenced by two conflicting forces, the desire of the Government to stimulate production and the desire of the Government to prevent profiteering. The expansion of currency and bank credit, which followed the Government's expenditures and commitments, sustained and distributed the price inflation. In much of the discussion of currency and credit inflation and their relation to price inflation insufficient attention has been given to the practical difference between private operations, on the one hand, and those of a government in war time, on the other. A government in war time, may,

[1] **Letter of Governor Harding to the Chairman of the Banking and Currency Committee, United States Senate, dated August 8, 1919. *Federal Reserve Bulletin* for August, 1919.**

to an extent private operations cannot, upset the balance between the supply and demand for commodities without first obtaining currency or bank credit.

The cost of living here has increased less than in any of the belligerent countries (including Japan [1] which assumed no ap-

[1] Japan has a bank rate above eight per cent. *Commercial and Financial Chronicle*, April 24, 1920, p. 1699. Her inflation is a gold inflation.

"The cost of living has advanced threefold more than before the war. . . . The gold holdings of Japan have now reached the unprecedented total of 1,899,000,000 yen, of which 1,061,000,000 yen belongs to the Government and 838,000,000 yen to the Bank of Japan. Of this large sum only 545,000,000 yen is in Japan, 1,354,000,000 yen being invested or deposited in England and the United States."—*Economist*, January 3, 1920, pages 19-20.

"The abnormal inflation of currency not only keeps up prices, but is lending impetus to speculative fever, which now knows no bounds. Investments in new enterprises between January and October this year amounted to no less than 2,859,000,000 yen, or more than for the whole of last year, when investments totalled 2,676,000,000 yen; and the expansion of capital is now such that the authorities can no longer regard the situation as wholesome. Banks have been officially instructed to restrict loans, and to preach economy and caution, but speculation continues rife. It is frequently reported that officials are interested in speculation, and that that is one reason why no control is exercised over note inflation. The same thing went on after the war with Russia, but it was followed by panic and numerous business failures, leading to prolonged business depression.

"The effect on industry and society is far-reaching and disaffecting. Many enterprises, such as weaving and shipping, continue to pay enormous dividends, though most of the mushroom enterprises can hardly pay their way. Industry is marked by increasing unrest, with frequent strikes for higher wages and shorter hours. Of late the greater part of this unrest has been in shipyards and mines. At one of the copper mines recently the troops had to be called out to put down violence when 6,000 miners began to take matters into their own hands. This is the first time in the industrial history of Japan that troops have had to be called out to deal with strikes. The cotton mills, which are paying such big dividends, being manned mainly by women, have labour in their own hands, and so far they experience no labour unrest. In most cases mill work, so far as women go, is little less than a form of slavery, as the girls are not free to leave when they wish, and seldom get away until invalided out. On the other hand, the luxury and extravagance of the profiteers and the newly rich tend to demoralize society, and cause revulsion of the poor against the rich. The most prosperous concerns in cities are the restaurants, houses of questionable pleasure, and the dealers in jewellery and expensive ornaments. The wealthy are buying up whole lots of houses, and pulling them down to erect grand mansions with spacious gardens for themselves, to the great resentment of the poor, who cannot find dwelling accommodation. A great part of big cities like Tokyo is taken up with these gardens of the privileged and the wealthy, while

preciable part in the financial burden of the war) or in the neutral countries of Europe.[1] This was in no small measure due to Treasury methods of financing the war.

Since Armistice Day. Since armistice day the world has not only failed to make progress towards the restoration of healthy economic life, but in fact has receded farther from a sound position. We have failed to restore peace and peace conditions in Europe, and in America unsound economic ideas have in many instances prevailed and the effort is being made, first here then there, to improve the condition of some of the people at the expense of all of the people.

Inflation here since armistice day is attributable to three principal causes; (a) World inflation and the internationalization of prices; (b) Heavy expenditures by our Government and government interference with business; (c) Reaction and waste among our own people.

(a) For five years the world has been consuming more than it produced, living upon its capital, and the governments of the world have been issuing evidences of indebtedness to represent the wealth destroyed. This has caused world inflation of prices.

The inflation which has taken place here since armistice seems attributable in no small degree to the inflation of the continental European currencies operating upon the optimism of the American people. Our enormous export balance has been financed by forced credits to Europe which, because of the necessary gold embargoes, cannot be liquidated in the ordinary way.

People have been led to believe that there is a mystery about foreign exchange and that in some way America is at fault for not protecting the European exchanges from depreciation. In war time the measures taken by the belligerent nations in respect to international trade and finance were more or less complete. Embargoes on the export or import of gold were accompanied by embargoes on the export and import of commodities, by domestic price-fixing, by fixing the price of money,

space for common dwellings is at a premium, the poor being driven into the slums. This leads to social disaffection and encourages Socialism."—*Economist*, February 7, 1920, page 263.

[1] *British White Paper* (Cmd.) 434, 1919, Statements of Production, Price Movements and Currency Expansion in certain countries.

by control over capital issues, by control over foreign exchange and by Government loans in foreign countries. These controls probably should not have been removed where the gold embargoes were to be retained; for the gold held in Europe has been made a basis for further inflation there and the ever-expanding European currencies have been sold for dollars to be used to purchase here and elsewhere things not needed as well as those needed. The depreciated price at which European currencies are taken in consequence of these methods means for them a rapidly increasing foreign debt which will make the ultimate resumption of a gold basis more difficult.

Our own prices are being inflated and our own banking and currency position expanded by the feverish speculation in European currencies, credits and securities, including those of countries with which we are still technically in a state of war.

In the present position of the international balances and of the foreign exchanges and because of gold embargoes Federal Reserve Bank rates cannot function internationally, and operate solely upon the domestic situation.

(b) Government expenditure is at the root of inflation all over the world. Wise methods of meeting it may mitigate the inflation, but they cannot prevent it.

The Government of the United States has been slow to realize upon its salvageable war assets and to cut down expenditures growing out of the war.

While Congress deliberated, the Government held control of the railroad systems of the country for a year and a quarter after fighting stopped, and furnished transportation at less than cost. Then Congress ordered the railroads returned to their owners with a new expenditure of $1,000,000,000 by the Government for their account and the deferment for years of the $1,000,000,000 the railroads owe the Government.[1]

[1] The actual cash expenditures of the Railroad Administration for the six months ending June 30, 1918, were $120,000,000, for the fiscal year ending June 30, 1919, were $359,000,000, and from July 1 to March 31, 1920, were $776,000,000, a total of $1,255,000,000. The recent legislation and that now pending make specific appropriations to the amount of $800,000,000 and indefinite appropriations (including a guaranty to short-line railroads which were not taken over by the Government) which will involve expenditures to the estimated amount of $300,000,000. It is safe to say that the Government's expenditures and losses on account of the railroads and its investments in the railroads will shortly amount to $2,350,000,000.

The interference of Government in railroad affairs, begun many years before we entered the war, has subjected business and industry to the gravest hardships for lack of adequate transportation and has involved a great additional strain upon our credit facilities. You can fix the price of capital but you cannot make it work for that price. You can fix the price of labor but you cannot make it work for that price. By holding down rates for the shipper, the railroads have been kept so poor that neither capital not labor will work for them. The shipper has cheap rates but he cannot get transportation. The producer has to borrow because he cannot have his goods brought to market; the consumer has to pay higher prices because he cannot get the goods. Here there is double inflation. Cheap rates increase the demand for transportation and decrease the supply of it.

If the railroads had been allowed to charge reasonable rates, the Government would have lost nothing in their operation, and it would not have been obliged to invest so much money in them for, given reasonable rates, they could have obtained capital through private channels.[1]

The United States Shipping Board expended in the fiscal year 1917, $14,000,000, in the fiscal year 1918, $771,000,000, in the fiscal year 1919, $1,820,000,000 and in the fiscal year 1920 (to March 31, 1920), $433,000,000, a total of $3,038,680,338.79 to which should be added about $176,000,000 expended from the proceeds of operation and sale of ships. The actual cash expenditures since armistice day amounted to approximately $1,600,000,000, while Congress deliberated as to our shipping policy. Notwithstanding the fact that it has been engaged in commercial shipping at a time when it is exceptionally profitable, the Shipping Board has made as yet no net return to the Treasury, its expenditures still exceeding and absorbing its receipts.

Five billion dollars spent or invested in railroads and ships, the larger part of it after the fighting was over! Why are the railroads being run today at a loss at the Government's expense? To what end are we moving in our shipping policy?

[1] The Transportation Act of 1920 appears to offer no permanent relief from the grave situation resulting from our insufficient transportation facilities, for it indicates that the railroads are entitled to earn 5½ or 6 per cent when new money is costing those in the highest credit 7 or 7½ per cent.

Instead of telling the people frankly and boldly that prices are high because they are wasting, we fix prices and prosecute profiteers, in order that the people may buy more and pay less.

Instead of telling the people that Liberty Bonds have depreciated because they are treating their Liberty Bonds as spending money, we clamor that the rate of interest upon the bonds is too low and urge a bonus to bondholders disguised as a refunding operation.

Instead of telling the more thoughtless of the young men who were selected to fight the war, and who came back better and stronger and more fit to fight their own battles than they ever were before, to go to work and save their money and look out for themselves as their fellows are doing and as any self-respecting man should, we listen complacently to the organized demands of some of them for a bonus, euphemistically called "adjusted compensation."

Penny-wise and pound-foolish, we leave the executive departments underpaid, and undermanned, as regards supervisory employees. While Congress struggles to effect economies at the expense of efficient administration of the Government, it takes time to add $65,000,000 to Civil War pensions.

From November, 1918, to March, 1921, nearly two years and a half, the first two years and a half after fighting stopped and probably the most critical two years and a half in the world's history, the Government of the United States is deadlocked against itself, a Government by obstruction. It is at least questionable whether the progress of reaction would have been so complete or so disastrous if our institutions had not given this country, during the most critical period of the world's history, a Government divided against itself, and therefore incapable of effective leadership in national or international affairs.

(c) At this most critical moment in the history of Europe, when our own financial and economic stake in Europe's affairs is so great that disaster there could mean only disaster here, many of our own people have turned gamblers and wasters. For plain living and high thinking we have substituted wasting and bickering. We enjoy high living while we grumble at the high cost of living—of silk stockings and shirts for the poor, of motors for men of small means, of palaces for the profiteer and the plutocrat.

Unhealthily stimulated, commercial business appears to prosper and commercial expansion proceeds unchecked. From March, 1919, to March, 1920, though holdings of and loans upon Government war securities of all reporting member banks of the Federal Reserve System (about eight hundred member banks in leading cities believed to control about forty per cent of the commercial bank deposits of the country) decreased from $4,000,000,000 to something over $2,000,000,000, their other loans and investments increased from $10,000,000,000 to over $14,000,000,000. For every dollar of credit released by the Government, two dollars were extorted by business. Reporting member banks' loans on miscellaneous stocks and bonds, included in their "other loans and investments," amount to $3,000,000,000, or one and a half times their investments in and loans upon United States war securities. From May 2, 1919, to March 19, 1920, though the Reserve banks reduced their loans and discounts upon Government war securities from $1,800,000,000 to $1,400,000,000, they increased their other loans and discounts from $350,000,000 to $1,400,000,000.[1] Evidently a very small proportion of the Reserve Banks' present loans and discounts are "war paper," though half of them are collaterally secured by United States Government war securities because of the wise policy of maintaining rates differentiated according to the character of the security.

High rates of interest and discount, limitations of currency and credit, these and all other traditional methods should be used, and used courageously; but they will not suffice under the abnormal world conditions now prevailing.

[1] On the other hand, though Federal Reserve Banks' loans and discounts secured by Government war obligations rose from about $250,000,000 at the end of 1917 to a high of over $1,800,000,000 in May, 1919, their other loans and investments never during the war rose above about $850,000,000 (in November, 1918) and were down as low as about $350,000,000 in May, 1919. All reporting member banks' holdings of and loans upon United States war securities increased from a low of about $1,250,000,000 in December, 1917, to a high of about $4,000,000,000 in May, 1919. Their other loans and investments increased from about $9,500,000,000 in December, 1917, to a high, for the war period, of about $10,750,000,000 in August, 1918, and contracted to less than $10,000,000,000 in March, 1919. A smaller number of banks (about 630 controlling about 35% of the commercial bank deposits of the country) were reporting in December, 1917.

IV

Remedies

We must get together, stop bickering and face the critical situation which confronts the world as we should a foreign war. We must recognize our responsibility to, and our stake in, Europe, and in one way or another lend her our moral support and leadership and economic assistance, but without Government loans. We must cut Government expenditure to the quick, adjure bonuses, and realize promptly upon all saleable war assets, including ships, applying the proceeds to the war debt. We must have a National budget with teeth in it, which means among other things that no appropriation shall be made by Congress without a critical examination and report on ways and means by the Treasury, representing the financial end of the executive branch of the Government, and the Ways and Means Committee of the House and the Finance Committee of the Senate, representing the financial end of the legislative branch. We must promptly revise our tax laws to make them more equitable and less burdensome without reducing the revenue. We must restore the railroads to a self-supporting basis by establishing rates which will insure a return for capital and labor commensurate with the return to be had elsewhere at a time when there is a world-wide shortage of both. And, above all, we must work and save. We must produce more but, more important still, we must consume less.

THE FEDERAL RESERVE SYSTEM AND INFLATION

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THE question of inflation and its relationship to the Federal Reserve system and the banking policy of that system has now attained the proportions of an issue, and effort is being made in various quarters to locate what is called the responsibility for it. I wish at the outset to say that it does not seem to me that the history of the present inflation is of very large interest except for the purpose of indicating where errors in banking and public finance have been made, in order that we may correct them in the future. There was during the war only a minimum of effort to discuss the subject of inflation from the banking standpoint, and neither our economists nor our public men offered substantial leadership on the issue, so far as has come to my attention. Notwithstanding that the bankers of the country, as well as the economists, were from time to time freely consulted with reference to the whole subject, they practically declined to consider the problem in its bearings on credit and prices. It would have been disastrous to make problems of war finance a partisan issue during the continuance of hostilities, but there was nothing to prevent the non-partisan discussion of it from a scientific financial standpoint. As I have said, little or no such discussion occurred, and the responsibility for what has happened in connection with inflation is thus a general national responsibility.

Neither does it seem to me appropriate to discuss the subject of inflation as a peculiar product of the Federal Reserve system. Inflation has occurred from one cause or another in every country of the world, and prices have advanced more in many of them than they have in the United States. Most of the banking systems of the world are in a less solvent and liquid condition than is that of the United States. The United States has technically maintained gold payments, an achievement which was not possible during the Civil War. Federal

Reserve banks acted as the fiscal agents of the Government of the United States and any other system of banks or national bank depositaries, or a central bank, had one existed, would have done the same, as in duty bound to do.

What I have to say relates to the present problem of inflation and its relationship to the Federal Reserve system. The issue is partly one of financial policy. It is also a problem of political morality. Inflation has occurred in this country, as it has everywhere else, and the question now is how to get rid of it, or indeed whether we wish to get rid of it at all, for already there are two schools of thought on the latter point. As a preliminary to this discussion, however, it is first necessary to define the term *inflation* as it will be used in this discussion. By inflation is here meant that condition in which prices are, for non-commodity reasons, raised to a level which is regarded as abnormal or excessive. I expressly set aside for the moment factors proceeding from the commodity side of the price ratio. Current advance in prices may be due either to influence exerted by the policy of banking and currency which has been pursued or by the methods of public finance which have been adopted or by other factors proceeding from the money side of the price equation or by all together. Thus used, the term *inflation* itself will not necessarily commit its user to any theory as to the exact means or the proportion of different means by which the condition has been brought about. It is a descriptive word and as such has no necessary implications of theory. By most of those who discuss the subject certain fundamental assumptions are made with reference to the connection between inflation and policies of banking, currency and finance, and this has often led to the diversion of discussion into dialectic paths and the development of a kind of *odium theologicum* which is anything but enlightening. There is no objection to this kind of discussion of the causes of inflation, except that it does not bring us to any definite point.

It is preferable to give the discussion a constructive turn since we are now at a critical stage in national development and our effort should be that of restoring permanently tolerable conditions. We have the coming generation for debating wiredrawn economic theories, but we have only the present moment for setting right existing conditions.

Looking at the question from this point of view and subject to these limitations, it seems to me that the subject assigned me this morning should be dealt with under three heads: (1) the question whether inflation is a good thing and as such to be continued; (2) the question how far the Federal Reserve system is affected by inflation; (3) the question what the Federal Reserve system can and must do in order to get away from inflation, if such a course be found to be desirable.

I.

Is inflation desirable?

The bald question whether or not inflation is desirable will usually be answered in the negative when it is put in the abstract, and yet at the present time there is a large school of persons who discriminate between the abstract and the concrete in this connection. They are first of all those business men and speculative interests who have found themselves able to profit through a steady rise of prices and who desire to see a further advance of prices in order that they may continue to make earnings in the same way as has been possible for them in the past. We need pay little attention to this group of apologists, since they are manifestly guided by self-interest. A second group of those who advocate the maintenance or continuance of inflation consists of those who believe that a retrograde movement, implying as it would a reduction of prices, would mean suffering and injustice as great as that which resulted from inflation in the first place, and who think it is not desirable to have the events of the past few years reenacted in the reverse order. They therefore urge that the present price level be recognized as permanent and that something be done to "stabilize" it or fix it at approximately its present point. This is the contention of Professor Fisher, who says in his book, *Stabilization of the Dollar*, that stabilization had better be undertaken at or near the present price level, although he contends that his plan would be compatible with a desire to effect a gradual reduction in prices. Bankers in many cases believe that reductions in prices will result in so wide a condition of stringency or inability to liquidate as to cause financial failure and collapse, and while fully admitting the injustice of the present situation they are

in many cases definitely inclined to think that less harm will be done by maintaining present levels, or at all events by making the retrograde movement extraordinarily slow. While much more might be said to amplify and enlarge upon the position taken by those who thus present a scientific and practical argument in favor of inflation, I believe that I have fairly stated their case, and let me add that their argument strongly appeals to me as containing a considerable amount of force. I am, however, definitely of the opinion that the weight of argument is on the other side and that it will be impossible to develop any satisfactory or effective scheme of economic recovery that does not provide positively for a gradual reduction of inflation. There is no difference of opinion regarding the injustice which has been produced by the inflationary process, and I believe there is little variation of view as to the location of the injustice.

It has fallen upon the rank and file of the people and has affected with greatest severity the small business man, the small investor, the person of fixed income, and in general the less highly organized and less defensive classes in the community. It is probably true that if the present level of prices could be stabilized we should eventually level up our wages, prices and other economic shares to the new basis of distribution. A study of the situation, however, shows that this levelling-up process is far from being completed and that those who advocate inflation fail to recognize that inflation, instead of having already borne its perfect fruit, has only made a comparatively small start in changing the old order which, in the world of fact as well as in poetry, only slowly "changeth giving place to new." We are, in short, not at a completed stage of our journey toward higher prices and the readjustment of shares in the distribution of wealth, but only at a half-way house from which we may go forward or backward, and in either case must incur much suffering, the one thing that is certain being that we cannot stand still. It seems to me, therefore, that the harm and evil of the retrograde movement will at least not be greater than that of the further forward movement. Apart from all this, however, is the fact that a determination not to restore the old level of prices, or at all events a lower one than that which now exists, has some very

serious implications which are usually overlooked. Foremost among these is the abandonment of the gold standard. I believe that those are right who contend that in order to return to a sufficient basis upon the present level of prices it will be necessary either to produce gold in enormously greater quantity by subsidizing its producers, or else to adopt some new departure like that of a stabilized dollar, in which gold itself becomes merely an incident in a currency system and not its tangible basis. We may question, however, rather seriously whether a plan for a stabilized dollar similar to that of Professor Fisher would succeed unless it had a larger backing of gold than could be afforded by the existing volume of gold in the world. A second implication which grows out of the determination to maintain the existing inflated scale of prices seems to me to be the continued maintenance of great differences between countries in the matter of banking liquidity and solvency. Were we convinced that we must maintain or peg our present system of prices, we could not view with equanimity the losses of gold which we are now suffering, no matter how seriously such gold might be needed by other countries. It would be a long time probably before all trading countries could be brought to anything like the same general degree of uniformity and similarity of banking and redemption conditions which existed before the war. To sum up, therefore, it seems to me that a maintenance of inflation means continued injustice, greater suffering than at present, failure to redress a very serious moral wrong inflicted upon the rank and file of the community, and the almost inevitable development of chaotic conditions of banking and currency, or in lieu thereof, resort to others that we know not of. The conclusion, therefore, must be that inflation is not a good thing and that effort must be made to return to a normal level of prices. This at once raises the question what is a normal level, a problem to which different persons will return different solutions, and which we need not definitely answer at this time since we are discussing merely the general question in which direction we shall turn our steps and not how far we shall go. It is not necessary to cross the inflationary bridge before we come to it, whether we go forward or backward, but merely to decide toward which bridge we shall direct our course.

II.

The second question suggested for discussion now presents itself—where does the Federal Reserve system stand with respect to inflation today? Bearing in mind the definitions already accepted as the basis for what is here said, this question becomes an inquiry how far the Federal Reserve system has diverged from its normal or standard condition. The Federal Reserve system was originally planned and organized as a system for the accommodation of business and for the discounting of paper of fixed maturity growing out of industrial, commercial and agricultural operations. At the present moment it is carrying in its portfolios about $1,500,000,000 of so-called war paper, and about $1,500,000,000 (discounted and bought) of unquestionably business paper. As a result of the topsy-turvy conditions created during the war, it is, however, reasonably to be believed that a percentage of the so-called war paper has in fact been given for business purposes and should therefore be regarded as abnormal in nothing except form. If, for example, A is a borrower at a bank who stands possessed of $500,000 of Government bonds and finds that he can borrow more cheaply at Federal Reserve banks by offering straight single-name paper collateraled by such bonds than he can by discounting the paper growing out of his operations, he will under ordinary circumstances prefer to borrow by offering the single-name note collateraled by Government bonds. Despite the changes in rates of discount that have been made from time to time in the Federal Reserve system, it still remains true that a differential exists in favor of war paper, and this prevents us from knowing exactly what proportion of the actual holdings of the Federal Reserve system consists of paper whose purpose is of such a nature that by the original or peace-time terms of the Act it would never have made its appearance in the bank portfolios at all. It is, however, a factor which must be reckoned with. It would thus seem that in order to get rid of inflation in the sense herein assigned to that term, that is to say, in order to return to peace-time prices, it will be necessary either to substitute somewhat less than $1,500,000,000 or possibly some $1,000,000,000 to $1,250,000,000 of paper growing out of commerce, industry and agriculture, in the Reserve banks, or else to see a reduc-

tion of corresponding amount in the portfolios of the banks. Needless to say, if the Reserve banks were to rediscount such a volume of actual commercial paper as to take the place of the total amount of actual war paper they now hold, there would be as great a volume of credit extant as there is today, and the question may be raised whether in that event there would have been any elimination of inflation. This question is, however, comparatively easily answered when it is remembered that such an accretion in the total amount of paper in the community, and hence in the Reserve banks, would be the result of a corresponding increase in the total volume of business, whereas our discussion is based upon the assumption that there is no change in the commodity side of the situation, but that that remains practically stable. The conclusion of this analysis, therefore, is that a return to normal conditions at the present time on the part of the Federal Reserve banks might involve a reduction in their portfolios of probably $1,000,000,000 to $1,250,000,000. Moreover, we must frankly admit that in so far as the Federal Reserve banks continue to retain this volume of paper in their portfolios, they would be contributing to the maintenance of inflation and would be aiding to sustain the existing level of prices. They would be, in other words, accepting the view that inflation is a good thing or that at all events it cannot now be corrected, nor should we try to correct it. It must not, however, be supposed that the control of inflation is entirely vested in the hands of Reserve banks or that the inflated paper of the country is all in their hands or under their control. The topic assigned me for discussion is the Relation of the Federal Reserve *System* to Inflation, and the system includes both the member as well as the Federal Reserve banks themselves. If we examine the conditions in member banks of the Federal Reserve system we shall find that, taking returns from banks in 100 selected cities as representative, and apart from Treasury certificates of indebtedness, there is in the aggregate a holding of loans secured by war obligations amounting to about $1,200,000,000, while, in addition thereto, there is a holding of loans secured by stocks and bonds other than United States Government securities of about $3,200,000,000, all other loans and investments being about $11,000,000,000. We may sum this up by saying that

the entire loans and investments of these member banks are about $17,000,000,000, out of which about $4,400,000,000 represent loans on non-liquid security, including both Government bonds and other obligations, and the stocks and bonds of private concerns. The figures thus given include bills payable with the Federal Reserve banks secured by United States obligations amounting to something like $800,000,000, but even deducting this sum there is left $3,600,000,000 or probably $2,000,000,000 more than before the war. To figure the total of such holdings in all banks we must assume a certain relationship on the part of the reporting to the non-reporting banks. If this be taken at 40% the excess of collateral paper over pre-war holdings might be $5,000,000,000. This means that member banks are carrying a very large volume of non-liquid obligations with which Federal Reserve banks have nothing directly to do. It is true that the members are in part able to continue this policy because of the discounts they secure from Federal Reserve banks, but it is also true that even if Federal Reserve banks should exclude from their own portfolios everything except eligible paper of the strictest kind, they would still have no means of preventing member banks from using the funds obtained by rediscounting for any purposes that they chose, and that if they chose to employ these funds in sustaining speculative operations they could do so. It may be answered that a higher rate of discount charged by Federal Reserve banks would compel many of these banks to discontinue their speculative loans because of the fact that they could not afford, or would not find it as profitable, to go on making such loans if they had to pay on the commercial paper which they rediscounted a rate of interest so high as to exhaust the profit they would otherwise make. The trouble with this view is that, as will presently be explained more fully, the rate of interest does not operate in the way thus indicated. In the case of many banks a moderate advance in rates of interest has no particular effect upon the volume of their rediscounts. Their rate to their customers is so much higher than any rate that is likely to be charged by a Federal Reserve bank that they are not especially affected in their applications for new loans by the circumstance of an advance in discount rates. A heavy advance in rates, uniform as it would necessarily be, would

cut off much desirable paper in financial and manufacturing centers, but it would leave the door open for much paper originating in out-of-the-way sections of the country where interest rates are phenomenally high. We have in the United States a problem of banking control which is different from any that exists abroad, and which offers a much more difficult application of the theory of control of the volume of credit by discount rates. Summarizing this situation, therefore, we must admit, I think, that whatever may be the responsibility of the Federal Reserve system for inflation, it has not today anything like full control of inflation, and that successful deflation can be effected only by the direct and active coöperation of member banks. This means the establishment of a general consensus of opinion in favor of deflation. It is not a result which can be accomplished by merely resolving to raise rates at Federal Reserve banks or by making it difficult or impossible for members to get credit. Careful selection of eligible paper, careful rationing of member bank borrowers, and the adoption of other means, will no doubt after a time produce results, but all these processes will necessarily be slow. How to apply them and how far and how fast to go, is the actual problem of the immediate present.

Here is the point around which banking discussion and criticism should properly center, not around what was done two or three years ago. Constructive work can be done by showing in what particulars the present policy of Federal Reserve banks errs or in what it is not adapted to the ends which are accepted as correct or sound by those who are expressing themselves. Believing, as I have said, that inflation is bad and injurious and that a return should be made as speedily as possible to a normal basis, using that term in the sense already defined, I am therefore led to the conclusion that Federal Reserve banks and their members should reduce their portfolios in an amount corresponding to the excess of non-liquid holdings over pre-war portfolios. This conclusion would not be of much value without the corresponding expression of opinion as to how long such a process should take. On that point any view that may be stated would be more or less empirical and ought not to be put forward with any claims to special positiveness. It seems to me that while the question is not one

which can be dealt with in an absolutely rigid way, we should endeavor to eliminate from Federal Reserve banks and their members' portfolios the war paper which they now hold and their excessive secured loans, at a rate to be determined upon the basis of careful studies of the surplus saving power of the community at the present time. It should be possible to figure a reasonable proportion or theoretic ratio in which current savings should be devoted to the retirement of public debt of the Government, to the absorption by investors of existing Government obligations now in the banks, and to other purposes. If after due study we should reach the conclusion that a sum of say $500,000,000 could be theoretically spared each year to the reduction of war paper and secured loans now in the hands of Federal Reserve banks and their members, I believe that each group of institutions should shape its course in such a way as to effect the due proportions of curtailment in its notes and deposits, and that it should adjust its policy and its rates of discount in such a manner as to accomplish that object. If it be answered that this is a purely theoretic and dogmatic way of treating the situation and that it takes no regard of business exigencies or current needs, that it endeavors to adjust our banking policy to a situation in which unforeseen requirements may present themselves and far-reaching changes may develop, the answer should be made that when such conditions open upon the world at large, it will be time to change the policy and that, as was said by an American financier, the way to resume is to resume. We shall never reduce the volume of our bank credit and currency, and we shall never approximate to a lower scale of prices until we definitely reach a determination upon the subject. We may leave the present situation to chance and allow the inflation to continue until a violent breakdown occurs, and then we may accept the resulting price level with the same philosophy that is adopted by some of those who defend existing conditions; but we shall do more wisely if we resolve upon a given policy, let it be definitely known throughout the country, and proceed with its application. That it will cause difficulty and embarrassment in some quarters it would be futile to deny. That it will prevent greater difficulty and greater embarrassment seems to me an inevitable conclusion.

III.

By what means can such a reduction of credit as has thus been indicated be effected, and what would be its results?

It is proper to deal with the latter part of the question first and to say that the results to be accomplished by it will depend entirely upon the degree of coöperation that can be obtained through the community. If there be investors who are willing to absorb or digest the war paper, the effects of the change should be greatly minimized. If, on the other hand, the process of pushing the war paper out of the Reserve banks finds but few investors who are willing to coöperate, the inevitable consequence would seem to be that of lowering the value of Government securities upon the bond market to a point where they will compete actively with other securities and thus will compel the investment of such fluid funds as there may be. In any event, the absorption of these securities by the public necessarily means the withdrawal of an equal amount of current funds from investment in other directions. It does not destroy capital, as some seem to suppose, but it withdraws it—that is to say, makes it unavailable for the purchase of new securities.

Furthermore, as we have already seen in connection with the second part of our problem, the elimination of inflation involves action on the part of member banks which would be parallel with that of Federal Reserve banks. Members must not only carry out the policy of Federal Reserve banks to the extent that they are compelled to do so as a result of the shrinkage of credit produced by Federal Reserve banks, but they must also go farther and apply the same point of view in the conduct of their own business. How far can they succeed in accomplishing any such result? This depends very much upon the coöperation they can obtain from the public. Suggestion has already been offered that advances in discount rates will not alone attain the desired results. It may also be added that for reasons which have already been stated, mere restriction of the kind and character of paper which is admitted to the system will in the same way fail to produce the desired results. Rationing the amount of credit among the different banks, either in the way indicated by the Phelan act or by less stereotyped and uniform methods, will from time to time produce an effect. But in the last analysis the elimination of inactive,

non-liquid paper from the banks can be effected only through the general growth of a public opinion which recognizes the harm and danger involved in continuing along present lines. As methods of leadership, advances in discount rates, plans for the application of the Phelan Act in the several districts, and efforts to ration, have their influence. In practice it is not desirable to destroy business or cripple industry in order to carry out a theoretical plan of reform. Steady refusal to admit any speculative paper to member banks, and steady opposition on the part of Reserve banks to the granting of extensive rediscounts to any members which are notoriously speculative, must be the principal methods to be employed in this connection. The suggestion of some conspicuous figures in the banking world that the reserve requirements of Federal Reserve banks be lifted and that the embargo on gold be restored cannot be described in any other than the strongest terms as a disastrous proposal, a concession to the worst spirit of wild inflation.

Perhaps all this may be best, even though vaguely, summed up in the statement that the proper policy to be pursued in reducing credit is found in the application of the principles of sound banking and in the return to those standards of banking which prevailed before the war. It is not possible to stereotype sound judgment or to lay down absolutely hard-and-fast regulations governing its exercise. The main thing, as already stated, is to establish a definite standard of contraction or reduction, and so far as humanly possible to bring about a shrinkage of credit to that extent. There are some indications that such a shrinkage is already under way. Exportations of gold taken from our excessive stock have done some good, and the attempt of some of the more farsighted members of the banking community to get out of the investment market and keep out of it have likewise been beneficial. The refusal to finance foreign trade by means of bank credit has likewise had a good effect, although not as good as would have been produced had the indirect financing of this kind been as steadily refused as direct financing. Perseverance in all these directions, and above all, the recognition of the distinction between investment and commercial banking will eventually restore our credit situation to a sound and normal position. Progress toward

such a condition will be more or less retarded or advanced by the progress of the rest of the world and we can hardly hope to attain a fully satisfactory situation until at least some decided progress has been made by other nations. The responsibility of the Federal Reserve system is that of holding fast to its ideas and guiding the banking community through a period of difficulty and inconvenience.

DISCUSSION OF GOVERNMENT'S FINANCIAL POLICIES IN RELATION TO INFLATION

I

A. BARTON HEPBURN
Chase National Bank

Mr. President, I am reminded of the story of a man who while addressing a large audience was disturbed by calls from the rear of the room of "Louder! Louder!" Finally some one in the center of the audience said, "Can't you hear what the speaker is saying?" The response was "No!" "Well," he said, "you are mighty lucky."

(Upon request, Mr. Hepburn then stepped up to the platform.)

Mr. Chairman, Ladies and Gentlemen: My comment on the addresses to which we have listened is one of general agreement and commendation. I want especially to endorse the views expressed by Dr. Willis upon the question of inflation and deflation, and the responsibility of the Federal Reserve Bank in reference to existing conditions.

We struggled here in this country for forty years to amend our archaic banking laws, and finally succeeded. My objection to the present law was that it created twelve regional banks. I thought we ought to have one central bank, with branches wherever necessary. That is the conclusion one naturally reaches after a study of the banking systems of other countries; the central bank system is perfectly logical, and should have been adopted in the United States. But the administration of the Federal Reserve banking system has made it a central bank; the system is absolutely dominated by the Federal Reserve Board at Washington and the Secretary of the Treasury, more particularly the latter so far, because of the extreme needs of the Government in its financial operations during the war. In its administration, I think that the system is worthy of all credit, and we are very much to be congratulated upon having it in force in our country.

Dr. Willis alluded to the fact that it was regarded as a superman and more was expected of it than could be realized; that is true. At the time our Federal Reserve legislation was pending the Chamber of Commerce here in New York invited Carter Glass and Sen-

ator Owen, Chairmen of the respective finance committees of Congress, to come to New York; they tendered them a reception and requested them to discuss the proposed Federal Reserve law. Each one of them made the statement that we never could have a panic again in this country; they made the statement not only upon that occasion, but they interwove that idea into their respective speeches wherever they appeared and made addresses; and that thought was given currency all over the country. Of course, I suppose it was born of the fact that the panics recently experienced were the result of money stringency. They had been caused by the hoarding of money by the people, coupled with the inability of the banking system to increase the circulation. A bank had to pay more for Government bonds as security than it could issue in circulating notes. The only way to relieve the situation was to buy gold abroad and import it. We cannot now have a money stringency panic, but we can have panics in this country, and unless I am very much mistaken, we are heading toward one now; there are all the elements of danger not only underneath the surface but right on the surface, and no panacea will correct them except economy and conservativism.

The price level (which Dr. Willis tells us cannot be maintained and perpetuated), as we all know, is the result of the law of supply and demand, and when the demand is vociferous, as it was during the recent war, the prices of commodities respond to that demand and rise, and as they rise, credit instruments in one form or another have to be made to consummate purchases. Necessary it may be, but, as Dr. Kemmerer told us, it has resulted in inflation in every war of major consequence. You can't maintain that the price level is stabilized, it is useless to try, and as prices advance, more credit instruments are created. But, gentlemen, please bear in mind that they follow the demand and are created to pay and consummate trades made. They do not, as some of our economists tell us (Dr. Kemmerer included), create the advance in prices; they follow the demand and satisfy it.

Dr. Kemmerer told us all about the inflation which we have had, and its causes, in a most explicit manner, very fully and accurately, and without prejudice or criticism, he gave a very illuminating discussion of the subject, and, barring this one criticism on his adoption of the quantity theory of money as to the regulation of prices, I am quite in agreement with him.

Now no one realizes better than a banker the very great problem that confronted our Government during the war, wholly unprece-

dented, and any comment or criticism made upon the administration should be made with full appreciation of the difficulties which confronted these gentlemen at Washington, and be leniently made for that reason, and only in the hope of leading to an avoidance of similar mistakes in the future.

I was very much surprised at Secretary Leffingwell's comment upon the lack of criticisms of the Government's action during the war, and the fact that criticisms were reserved until the present time. Everybody knows that criticism, or suggestion, or information are among the things that this Government at Washington does not want, and would not listen to. But I am sorry the Secretary isn't here, because I could call his attention to a number of things that were criticized, and the Government did know what the public thought about them. To begin with, there never was a more undignified proceeding inaugurated than the propaganda to float Government bonds and sell them to the public at more than they were worth. The Liberty Bond Committees took possession of our theatres, between the acts; they came into our banking institutions and held us up at all times; they got people's enthusiasm aroused and induced them in many cases to subscribe for more than they could pay for.

What the Government should have done was to have paid a fair price for money, paid what the bonds of the State of Massachusetts, or Minnesota, or New York were paying, or what the bonds of the City of New York were paying; they never should have offered bonds to the public at any lesser rate than the first credit existing in the country commanded. Had that been done, the twenty-two million who subscribed for bonds at one issue would have kept them and the bonds would have remained near par. But, as it was, the degree of patriotism of these people aroused by propaganda did not continue when their securities went down, and in a spirit of disappointment they sold them, usually at considerable loss, and they are going out of the hands of the general public and into the hands of strong holders.

This war has cost a great deal, and it has been paid for in various ways. You pay taxes; that you know. If you buy anything in a drug store or a dry goods store, you pay a little additional tax; you are reminded of that all the while. But what you may forget is that you are paying a tax every day, directly or indirectly, in the high rates of money. The very best mercantile credit in the country is paying eight per cent for money. Don't you pay that in the form

of increased cost when you trade with them? Surely you do! And why must you pay it? The Government today has six and a half billions of the money of the commercial banks, who are supposed to supply the commercial needs of the community; the withdrawal of that amount from the discount banks, removal of it from their supply of funds available for loans to merchants and individuals, accounts for your increased rate of money. This is part of the worst tax, the heaviest tax, the biggest tax, that you are called upon to pay, the increased cost of everything that you have to buy, comprehended in the phrase, "High cost of living."

Now if the Government had placed its bonds at an interest rate which would have kept them at par, kept them in circulation and in the hands of the community, they would not have been in the banks; the banks could have supplied your needs, and the price level would not have risen to so great an extent.

Instead, what did the Government do? It spent millions of dollars in this propaganda work, employed people and paid their expenses all over the country, to boom the Government bonds, a thing which would be a reflection upon the credit of any individual or any corporation; but that method was followed for every bonded issue offered the public. When the Treasury Department was organizing those booms for succeeding bond issues, they went into the market, to Wall Street, and bought bonds to sustain the price, marked them up, did just as brokers do and bankers do down there, which people criticize so much, and they have kept that up until just recently Secretary Houston announced the discontinuance of that policy. How much money do you suppose they spent in that way? They bought $1,839,000,000 of their funded debt which had been sold to the public, paid for the same with these revolving certificates of indebtedness, running from four to six months, which are placed with the banks at frequent intervals. Is that good business? Is that good banking? Was that necessary?

Now the Federal Reserve Bank did not have anything to do with this policy. I am a member of the Advisory Council of the Federal Reserve Bank, and they were all opposed. The methods that should be criticized are the methods that have emanated from the Treasury Department; and the Secretary of the Treasury has been given absolute control, practically, and rightly so, because of the enormous needs of the Treasury and the very great difficulty he had in meeting those needs.

I have mentioned briefly the principal causes which affect the price

level as it exists today, and which you are compelled to reckon with in the daily lunch-basket, in the daily administration of your household, and some other things that ought to have been, and could have been, avoided. The Government did not print greenbacks, as they did in 1865, and make them legal-tender; they did not ask the banks to take their certificates. But they notified the banks that they were expected on certain dates to credit the Federal Reserve Bank, as fiscal agent of the United States, with specified amounts for which they would receive certificates, bearing a specified rate of interest. And we did it; we did it cheerfully; we did everything which we were asked to do during the war; and we didn't criticize. We were not afraid they would call us "Pro-German", but we thought that the Government was engaged in a very great struggle for which it was illy equipped and not overcompetent, and we thought we might possibly militate against its success in winning the war if we expressed adverse opinions, so we simply grinned and bore it; and we are inclined to continue in that attitude at present. It is our Government, this is our Nation, and we are going to win out; but the situation might have been made much easier for us, as a people, as taxpayers, if some things had been avoided.

Dr. Willis has told about the vicious cycle of raising wages and then raising costs; but we have gotten to a point now where that doesn't any longer produce a favorable effect. We are speculating in this country not only on the stock exchange, but in commodities and in real estate, and in things that are local to the different sections of the country, to a tremendous extent; and that ought to be curtailed in some way. It cannot be done forcibly. We are also speculating very largely in foreign securities—for instance, take bonds of the City of Frankfort and other cities of Germany. The mark is worth over twenty-four cents normally; it is worth less than two cents now. Just think of it, one dollar can be made to count twelve times, in purchasing a bond of one of those first-class German cities, and it has been done to a very large extent. Other people have gone a little further and bought foreign exchange, in the belief that it would advance at some time. But for the banking community I want to say that we have been financing Europe in every legitimate way for a long time. We would not buy the Government bonds over there of nations that were not raising taxes enough to pay current expenses; we would not lend them money on which to live, but in the City of Prague, for instance, we made a syndicate, bought $9,000,000 worth of raw cotton, sent it to them (and are sending it

to them) for which they execute a trust receipt, agreeing to hold the cotton as the property of the syndicate and to manufacture it into finished goods and sell into the markets of this country enough of those finished goods to pay the original cost, the balance to be used as they see fit. In that way, you will notice, we get rid of the exchange which runs so strongly against them; they sell their product here; they make dollar exchange; they avoid the high rates of exchange. The same thing has been done in copper. As an investing community, as a banking community, we are doing all that can be done within the limits of safety, to finance the industries of Europe, even of those Governments over there which are not paying their way, and those newly created or half-born Governments that exist on paper only, which of course have no standing or credit. The banks of this country do not own the money they have on hand; they are simply trustees for it, and must exercise conservatism.

II

JACOB H. HOLLANDER

Professor of Political Economy, Johns Hopkins University

The meaning of "inflation", its extent and its effects, have been discussed with such clearness and agreement that no further comment is necessary. The causes and the remedies remain to be considered.

I shall be compelled, however, in harmony with the suggestion of the chairman, to deflate the discussion of causes and to dwell only briefly on the remedies. I do this with regret. For after all, our prime interest as economists lies in clear recognition of the causes of inflation. Moreover, it is our duty to set forth these causes for three reasons: First, in order that there may be a definite assignment of responsibility both as to policies and as to persons; this in no vindictive or hyper-critical sense, but as the one sure way in which we are likely to avoid like error in the future. I venture to say that it has only been the clear understanding in the public mind of the mistakes of Secretary Chase as to greenback financing in the Civil War that prevented us, alone among the nations engaged in the World War, from reverting to a policy of inconvertible paper money. In the second place, unless we understand our mistaken policies, we are likely to continue pursuing the same errors. And, thirdly, unless we know what the causes are, we shall certainly not adopt wise remedies.

There was agreement, I think, in this morning's discussion that a war can be financed in three ways: by taxes, by loans, or by issuing paper money. But there is one further way in which a war can be financed, which has not been mentioned, except incidentally by Mr. Hepburn, whose encyclopedic knowledge of money and banking, barring only a curious stone-age survival, a belief in the unsoundness of the quantity theory of money, did not permit him to omit the very large part which direct borrowing from the banks may play in war finance. It is this large continuing reliance of our Treasury upon direct bank borrowing that I regard as, if not the most important, certainly the most neglected cause of inflation.

I take it, before a company such as this, it is certainly not necessary to say that if the United States Government had pursued the financial policy followed in the Civil War and struck off additional United States notes and used them in paying the munition-makers and the ship-builders, the effect would have been higher prices, just as during the Civil War. But if, realizing the magnitude of the financial requirement and the limitation of printing presses, the Treasury, instead of increasing the supply of notes, had adopted methods which increased the supply of bank deposits, so that instead of making its payments with notes it would have made such payments by check, the effect would have been identically the same. In other words, if the United States, instead of using the bank credits which individuals had in their deposit accounts, had created bank credits of its own, there would have been an addition to the deposit currency of the country, just as clearly as there would have been an addition to the note currency of the country had it printed greenbacks. The term "fiat credit" could be applied just as appropriately to such government deposits as the term "fiat notes" could be applied to the greenback. Now this is precisely what we did during the World War—not only from the summer of 1917 until the armistice, but what we have since continued to do until the present. We have done this through the device of Treasury certificates of indebtedness. Designed originally as a mode by which the Treasury might anticipate the proceeds of war taxes and loans, just as any city anticipates tax revenue by the issuance of tax warrants placed with the banks, the certificates of indebtedness were gradually permitted to degenerate into a habitual mode of creating credit, credit which was before non-existent, which did not represent the diversion of deposits from individual Government accounts, but which represented new creations unrelated to commercial requirements, tracing

their warrant to Governmental fiat as distinctly as the greenback issues of Secretary Chase.

The mode of procedure was very simple. The Secretary of the Treasury, at more or less regular intervals, issued and placed with the banks, by a manner of administrative compulsion such as Mr. Hepburn has described, an amount of certificates of indebtedness. The banks paid for these, not by taking credit from other quarters, but by writing upon the page of its ledger headed "government deposits" so many millions of additional credit. Thereafter the Government drew upon those credits by transfer to the Federal Reserve banks, and then liberated them in ordinary disbursement. Thereafter they found their way into the deposit accounts of the ship-builders and munition-makers, operating precisely as though the Government had taken from its presses brand-new, fresh-engraved notes and used them in payment of its bills. In other words, additional credit was created by Government fiat, utterly unrelated to commercial requirement. This credit, disbursed in the course of Government expenditure, found its way into individual accounts and tended to swell the amount of deposit currency over and above the amount of note currency.

Just one word more, for I do not mean to abuse my allowance of time.

What has been said as to the imperviousness of the Treasury to suggestion not only as to individual opinion but as to actual experience and as to positive recommendation, I think in this particular is true beyond question. The Cunliffe commission in England had made careful investigation and had traced word for word and item for item the unwholesome course of this process of bank borrowing, and a competent group of experts in the United States had condemned it. But, leaving aside what was done in the first instance as, after all, involved in the wastage and losses of the war, we face the hard fact that this process continued with accelerated speed after the armistice, and only within the last month, under the administration of Secretary Houston, who for the first time has injected a degree of candor and ingenuousness into the borrowing operations of the Treasury, this process of fiat-credit making has continued and impends with respect to the further financing of the floating debt. In other words, the United States has now practically three billions of unfunded floating debt in the form of certificates of indebtedness, largely held by the banks, that will mature between now and next April.

It depends upon the policy which is adopted now, whether we are to continue the same process of renewing and extending that debt by the creation of further fiat credit, or whether we shall adopt the measures which England in the last two weeks has adopted, with a fine courage harmonizing with her brilliant financial tradition. We must extinguish that debt by spending less or taxing more, or we must fund it so that it will be absorbed by investors out of existing deposits. If we fail to do any of these things, and pursue the methods which we pursued during the war and after the war, by renewing the floating debt, through the issuance of additional or continuing certificates of indebtedness, taken in the main by the banks, paid for by the creation of additional credit against which no reserves need be held and upon the taking of which no limit therefor is imposed upon the banks, if we do that, our talk of deflation is as futile as the talk of lifting ourselves by tugging at our bootstraps.

III

DR. B. M. ANDERSON, JR.
National Bank of Commerce

I want to talk about certain things which Professor Willis has indicated as the more important matter. Constrained, by the assignment of the topic, to talk about banking, he has indicated that the more fundamental things are in the fields of production, consumption and the like, and that is where the emphasis, it seems to me, belongs. I am one of those economists of Professor Hollander's "stone age", who join with Mr. Hepburn, Professor Mitchell, Professor Willis, and others in being skeptical of the quantity theory, although recognizing, I trust, a good many of the factors which adherents of the quantity theory have emphasized this morning.

The central point in the explanation of the present high prices of the United States, with our gold standard, is shortages of goods and the speculation attendant upon those shortages. The basic cause of the shortages is the enormous excess of exports over imports, which has been going on for the last five and a half years, and which has been greater since the armistice than it was before the armistice, running $336,000,000 in the month of March of this year; running $625,000,000 in June of last year; and averaging $350,000,000 or more per month since the armistice. When this export balance disappears, and when our domestic markets are called upon to absorb

three or four hundred million dollars worth of goods per month that they are not now absorbing, we shall see lower prices.

The export balance does not tell the whole story, of course. We diverted labor, engaged largely in producing peace-time goods, to producing cantonments, ships, shipyards, factories for making aircraft and the like during our own participation in the war. We withdrew five million men from industry for the Army and Navy. When these men returned last year in large part to industry, we naturally expected an increase in production. It has not come. The year 1919 showed a reduction in the physical volume of production of at least ten per cent, I suppose. All who have investigated the matter seem in agreement that there is a substantial reduction, despite the return of the soldiers to industry, in the physical output of 1919 as compared with that of 1918.

Coupled with this decreased production, which I attribute to the prolonged strain and resultant derangements in our industrial system which the war has involved, came a great increase in our export balance of trade and a great increase in domestic consumption as our people relaxed from war-time economy and swung to the opposite extreme. The net result of diminished production, increased excess of exports over imports, and increased domestic consumption and extravagance, is that shortages of goods are markedly greater at the present moment than they were at the time of the armistice.

Now in normal times the world lives from hand to mouth. It was estimated, before the war, that England would usually have about a six weeks' excess of food on hand and that an interruption of shipping for six weeks would mean that England would be brought to the verge of starvation. I have estimated roughly that in the United States, in the year 1912, a normal year, we had on hand in the form of consumers' goods ready, or nearly ready, for the market about a three or four months' supply. That is a liberal estimate. The cessation of industry for three or four months would have brought the United States to direct famine and want. Any such interruption, therefore, of industry as the war involved, any such enormous increase of consumption as the war involved, shortens existing stocks of goods tremendously and brings the most acute shortages in many lines. The world lives from hand to mouth, and the surpluses have been enormously reduced. Now it is here, I think, that the emphasis belongs, rather than on the banking and monetary phenomena which certain of the speakers this morning have emphasized.

No doubt, if gold had not come into our system during the war,

we could not have expanded our bank loans as we have and at the same time maintained the gold standard. Probably we should have been forced off the gold standard, and in that case prices would have gone higher than they did go. But gold has been leaving for over a year now. Just about a year ago the gold embargo was removed. We have lost nearly $400,000,000 in gold since that time. None the less, prices have gone up and banks have continued expanding at a tremendous rate, because of these factors in consumption, production and export. No doubt if the Federal Reserve banks had enforced a stronger discount policy earlier, we might have retarded that expansion somewhat, and prices might have been held back somewhat. But I call your attention to the fact that money has been tight since July and August last. Call rates in the stock market especially have been at prohibitive figures repeatedly since last August. No doubt if the Government had borrowed less and taxed more we should have forced more economy upon our people, and if the Government had made larger use of funding loans rather than of treasury certificates, which are taken chiefly by the banks, there would have been more economy forced upon the people.

But the fundamentals lie somewhere else. When the underlying factors change and prices turn downward again, bank loans and deposits in the United States will also decline. This happened at the time of the armistice. Following the armistice, there came a reaction in business. There came a decline in commodity prices, amounting to some ten per cent on Bradstreet's index number, which represents those wholesale goods on which bank loans are most likely to be made. Commercial borrowings fell off rapidly. I speak now as one who saw it from the inside of a bank. There came to the great New York City banks millions and millions of dollars daily, in one, two and five dollar bills, and other small currency, sent in from out-of-town banks. Payrolls were falling off; retail business was falling off in many centers, and the merchants didn't need so much hand-to-hand money. They turned it in to their local banks, who sent it in to the New York banks. The New York banks then turned it over to the Federal Reserve banks and reduced rediscounts. The volume of Federal Reserve Notes was reduced about ten per cent during that period. A liquidation process started, which would have gone far had it not been checked and reversed by that tremendous outpouring of goods to Europe, far in excess of the volume that had been going before, financed in the way that Professor Hollander objects to particularly, by the Government's borrowing from

the banks the funds which it loaned to Europe. That turned the scale. There came a revival, and a new boom started, which has gone on since.

One further point—a very brief one. One of the reasons why I don't accede readily to the type of reasoning that the quantity theory involves, is that it seems to me much more important to talk about the quality of money than to talk about the quantity of it. If the quality of it is right, it will adjust itself to the underlying factors. If the quality isn't right, you can get a very different situation. Our sound gold money and our sound banking system have primarily adapted themselves, passively, to the underlying facts. Where you have got away from the gold standard, your monetary phenomena are far more significant causal factors. Depreciated paper money throughout most of the countries of Continental Europe, despite their even greater scarcity of goods, is still the main cause of their high prices. Their prices have risen very much more than ours. It seems to me very important to distinguish between a price situation where you have the gold standard maintained, and a price situation where you have not maintained it.

THE INTERNATIONAL FACTOR IN PRICE FLUCTUATIONS

DR. WESLEY C. MITCHELL
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As I have listened to the preceding discussions of the causes of high prices my task of making a contribution has grown increasingly difficult. One by one the topics that require analysis have been dealt with, and I am left with little to say except that, technical matters apart, most of what has been said with reference to the United States applies to the world at large. We are prone to overlook, at least to understress, the international factors in our economic life. Let me recall therefore the close relations which subsist between changes in the price levels of the United States and the great states of Europe.

Once I had occasion to investigate carefully the wholesale price fluctuations of 1890-1910 in America, England, France, and Germany. I found that the curves representing the price levels of the three European countries agreed very closely with each other, so closely that one might fairly speak of a European price level in those twenty years. This composite European curve, however, differed somewhat from the corresponding American curve. Europe had a business crisis in 1890 as did we, but the succeeding depression was not aggravated by such monetary uncertainties as intensified our troubles in 1893 and 1896. While the price level fell on both sides of the Atlantic from 1890 to '96 the fall was more violent on this side. Next, the crisis of 1900-01 was severe in Europe, and scarcely distinguishable in America. That crisis was followed by a drop in English, French and German prices,—a drop from which recovery did not come until 1904-05. In America these years brought irregular movements—a drop in 1901, a rise in 1902, another drop during the " rich man's panic " of 1903-04 (primarily an American affair), and then participation in the European revival of 1904-05. Finally, after the crisis of 1907, business recuperated more promptly in the United States than in Europe and prices reflected that fact.

Even in years of peace, then, with a virtual gold standard prevailing on both sides of the water, American prices diverge somewhat from European prices under the pressure of domestic influences. But these divergences are merely qualifications of a broader proposition. In general the price levels of the United States, England, France and Germany rose and fell together in 1890-1910. If I could exhibit here a chart containing all four curves, the first thing you would see would be their striking similarity. And after you had noted the occasional divergences of direction and degree of fluctuation you would come back again to the substantial uniformity as the matter of chief moment.

Somewhat earlier I had looked into the differences between European and American price fluctuations during our paper-standard regime of 1862 to 1879. Superficially, of course, our greenback price curve seems to have no relation to the European gold price curves of those years. But analysis showed that close relationships of the sort that stand out clearly in the figures for 1890-1910 persisted throughout the disturbances wrought by the Civil War and the paper standard. Reduce our paper prices to the European monetary units and you find that in 1862-79 the major swings of the price level are much alike in the two hemispheres. The relationship was unquestionably interfered with by the necessity of making adjustments among paper money prices for commodities in American markets, the premium on gold, the quotations for foreign bills, and the gold prices for commodities in European markets. But these difficult adjustments *were* made with a varying lag in time and a varying margin of safety, so that the price levels on the two sides of the Atlantic did not lose touch with each other.

From this earlier experience during war and peace I argue that in studying the causes of the rise of prices in 1915-20 we do well to take an international rather than an American view of the whole process. Demonstrably the rise in this country differs notably in time and degree from the rise in other countries, and it is important to inquire narrowly into these differences and their causes. Yet the price level of the commercial world today is so much the outcome of one organized process, that we can't explain what has happened in any country except by what has happened in every country. The differences

that appear on the surface of the price quotations or index numbers from Europe, Asia, Africa, Australia or the two Americas, will largely resolve themselves into arithmetical adjustments if we bring into our analysis all the factors that are now affecting commercial operations. There remain certain lags to be accounted for and certain margins of inaccuracy in the adjustments possible under the confused conditions of the world war—differences probably somewhat wider than those marking off American from European price fluctuations in 1890-1910, but still differences that will appear modest in face of the similarities.

I hope that these suggestions will strike every one interested in this discussion as obviously just—commonplace. For if we do agree upon the controlling importance of the international factor in explaining what has happened in the recent past, we may have wit enough to use what is currently happening on the international stage as a guide to what America ought to do in the present and near future. We are now blaming ourselves noisily for our absurd performances in 1919. They were absurd; but what we did in that year of madness the whole world was doing—several of the nations on a more extravagant scale than ours. The recovery from this fit will also be an international spectacle and its consequences of price reductions, liquidations, bankruptcies and (let us hope) eventual resumption of hard work at making useful goods will run their course over all the continents. We have not been the leaders in the worldwide fluctuations since 1914. By watching those who have been the leaders we may tell what soon will happen to us.

INCREASED PRODUCTION AS A REMEDY FOR INFLATION: THE KANSAS INDUSTRIAL RELATIONS COURT PLAN

HENRY J. ALLEN
Governor of Kansas

IT is a very great privilege to stand for a few moments before this distinguished Academy, to present a remedy which I believe in, to ride in this very fine presence a hobby which I love very much.

Out in Kansas we have found what we believe to be an important remedy for industrial controversies. We believe that we will be able to produce a period of stabilization in the production of essential necessities by doing away with industrial warfare. We discovered the remedy out of the grim necessity of the coal strike last winter.

When the coal strike came on in Kansas and the central part of the United States, we found that everybody was out of coal, except the coal operators and the coal miners, and something had to be done, unless we were to submit tamely to the unpleasant process of freezing. The State took over the coal mines and called for volunteers. It seemed impossible for us to believe out there in Kansas, where all of us live more or less outdoor lives, the dictum that coal could be mined only under certain regulations, at certain hours of the day, by certain self-classified individuals; and so the State took over the coal mines and asked for volunteers. In twenty-four hours more than 11,000 people, most of whom had never seen a coal mine, came to dig coal. Out of this magnificent offering, the State chose a sufficient number of stalwart young men, most of whom had been in the Army, and these boys went to the district and, under conditions which the miners themselves declared were insuperable, they produced enough coal in ten days to relieve the emergency in two hundred Kansas communities.

They did more than that: they set up a new fundamental realization, in their own minds and in the minds of those who

looked on and in the minds of those who were benefited by the production, that Government still has a responsibility and a remedy in industrial warfare.

So the Legislature was called into session immediately, and there was produced, by an almost unanimous vote of both Houses (that is, by all but seven votes in the lower House and two votes in the Senate) the Kansas Court of Industrial Relations. It is not a court of arbitration or conciliation; it is a court of justice, and in the personnel of that court there is no man who represents labor from a professional standpoint, or employing capital from a professional standpoint—they all three represent Government, with its pledge of impartial justice.

We have all discovered that we have not made much effective progress by arbitration and conciliation; we have produced a beautiful book of language. We have gone farther, of course, in the report of the Second Industrial Conference than we had gone before in the suggestion of remedy. I think in that we have gone as far as the human mind and the human heart can go in conciliation; but, in my judgment, that report falls down just where arbitration and conciliation always fall down: at the point of definite decision. So the Kansas Court is founded upon the basis that arbitration has never provided any guarantee of successful adjudication. When you, representing employing capital, select your member of the board of arbitration, and I, representing labor, select my representative, and the two choose the umpire, that umpire may do one of three things. He may join your side and secure a partisan decision; he may join my side and secure a partisan decision; or he may dicker back and forth and secure a compromise. But into the consideration of that board of arbitration, there never comes any concern for the other party in the triangle, the party which in every essential industry is chiefly concerned, the public.

Out there in Kansas, we have been stratified somewhat as you have been here in New York: one and one-half per cent of the population representing employing capital at the top, six and one-half per cent representing organized labor at the bottom, and in between ninety-two per cent of us, a good-natured, protoplasmic formation, having no power save the good-natured power of passive resistance. Then, out in Kansas

when they sought to freeze us, this good-natured mass took on vitalization and began to heave and strain and feel muscle and tissue, and finally even anger. The law creating the court was passed on a Saturday night and on the next Monday 600 miners went out on what they called a " Protest Strike." They did not realize that in Kansas it had not in the past been left to the taste of those who live under the law, as to whether the law shall be enforced; and so the Attorney General went to the district for the purpose of bringing prosecutions under the criminal clauses of the law. When he had brought into the court a half dozen or more of the leaders who had brought on the strike, and had read the law and explained the purposes and the balance of justice in the court, they all said: " We are going to work in the morning. It wasn't a serious strike anyway; we had pay-day on Saturday, and this was just blue Monday."

This very significant thing happened at that hour. A group of miners having a grievance came voluntarily into the court and asked the court to adjudicate the grievance. That was significant for this reason: if they had followed their own by-laws, they would of course have taken their grievance first to their local chairman, who in turn would have taken it to the district chairman, who in turn would have taken it to the national committee, which in turn would have brought it to the operators. Then it would have gotten to the public in the form of a strike. But, ignoring all this elaborate machinery, they went voluntarily, over the head of their own officers, into the court and asked for adjudication.

Then Alexander Howat, the President of the district, had a meeting of his War Board, and a resolution was passed, declaring that any miner, or other member of the mining business belonging to the union, who appealed to the officers of the court, should be fined, for the individual fifty dollars; or if it were a union, or a union official $5,000 should be the fine.

Our union friends talk a great deal about individual liberty and the undesirability of government seeking to take away any of their rights; yet they did not hesitate to impose this heavy penalty upon any man who should seek to obey the law of Kansas. The court went into the district for the purpose of taking testimony in this cause, brought by the miners them-

selves. One hundred miners were summoned. They all came into the court to testify, with the single exception of Alexander Howat, the President of the district, and the members of his cabinet, all of whom said, " We will not testify because we do not believe in the law." Of course, much to our regret, it was necessary to send them to jail, not because they did not believe in the law, but because they did not obey the law. Some of the radicals from the foreign element, went the next day to the jail and called upon Howat; the sheriff, who was a chummy sort of a chap, took Howat out on a balcony where he addressed the mining audience according to his taste and whatever gift he had of language, which was considerable. The miners said, " Well now, that's a fine event; we just make a joke of the law." They went back into the district and said, " Day after tomorrow we will have a real demonstration." So they gathered up four or five thousand and went back the day after tomorrow, and of course in the meantime we had moved Howat to a jail farther away, where he would not be molested by company, and discharged the sheriff from his office, and there was the play with " Hamlet " left out.

Then we all held our breath, wondering what would be the next step of these miners. If they were as angry as Howat believed they were, it of course meant destruction of property; possibly they might have torn down the old jail, which would have been a blessing to the community. But these miners, instead of evincing any anger, looked at each other, and one said, " Well, the laugh is on us; " and they went back home and many of them returned to work.

Now the teaching of the incident was merely this: that these men had come to realize that the law was beneficial, and the influence of the conservative element in their ranks was working silently, as conservative influence generally works (it is only the radical influence that works noisily, generally); and the feeling is growing all through the mining district that the law is entitled to its chance.

The law has operated three months, and in those three months it has produced some definite effects which concern the purpose of this conference. In less than three months we have produced more coal in the bituminous district of Kansas than any other five and a half months in the history of the

district can show. Last year, up to the present time, there were forty-two strikes. This year, there has been no strike. Our mining friends tell us that we have taken away the only weapon they had in their right to strike. I contend that we have given them a much more dependable and useful weapon in the government of the state. The other weapon they had used too much in that district. In the past thirty-three months, ending with the beginning of the operation of our law, there had been 396 strikes—more than eleven strikes a month—and these strikes had produced, in monetary victories for the miners, the sum total of $778.94; they had cost the miners, in loss of wages, $1,600,000; and the miners paid in dues for strike benefits, out of their own scanty purses, last year alone $157,000. Surely government may do better for these poor people than that!

Now that we have established the court, it is found to have one advantage over anything that has been suggested. Its decisions are prompt and final. This court has teeth, and, fortunately for the justice of human society, the teeth are located both on the upper and the lower jaw.

We are proceeding upon an old and well recognized principle, that certain industries are impressed with a public interest, and because they are so impressed with a public interest, they are subject to reasonable regulation on the part of society. That is an old principle; it has been existing in organized government since the thirteenth century, when a blacksmith shop along the public highway in England was a public utility. For all these years, states and the federal government have recognized this principle, and so we have regulated the railroads; that is, we have regulated their fares, their rates, their safety appliances, their schedules, but we have not regulated the other very considerable element in railroad activities; we have never regulated labor. Indeed, on the other hand, we have allowed labor to regulate transportation, much to the disadvantage of the public sometimes. When these friends of ours, representing organized labor, come to talk to us about the impossibility of legislation for regulation, what explanation have they to make of their belief in the Plumb Plan, which is the strongest legislation that anybody has yet suggested in this country, and most of these union leaders are *for* it because

it provides for the purchase of the roads by the public and their operation in the interest of the railroad employees. How, in the light of their objection to regulative legislation, do they defend the action of their leaders in pushing through Congress, by coercion, the Adamson law? Why there never was an hour in the history of this country when any intelligent person has had so much occasion to bow his head in shame over the weakness of government, as that hour which saw the Adamson Law put through Congress at the intimidation of the labor unions.

I am going to read just a brief analysis of the law because I would like to lay it before you in the least phraseology possible. It provides that: "the operation of the great industries affecting food, clothing, fuel and transportation, is impressed with a public interest and subject to reasonable regulation by the State.

"It creates a strong, dignified tribunal, vested with power, authority and jurisdiction to hear and determine all controversies which may arise and which threaten to hinder, delay or suspend the operation of such industries.

"It declares it to be the duty of all persons, firms, corporations and associations engaged in such industries, to operate the same with reasonable continuity, in order that the people of that State may be supplied at all times with the necessities of life."

Before we passed the Kansas law, it was the habit of the operators to run the Kansas mines during the summertime on an average of about one day a week. It was more convenient, possibly, to sell coal upon a market that was a little short of coal, than upon a market that had a surplus, and so the average working time of a miner in that soft coal district during the year was 211 days. Now, under the Kansas Law, these mines will continue operation during the summertime and we will begin the season of the winter with a coal reserve instead of a coal famine.

"It provides that in cases of controversy arising between employers and employees, or between different groups or crafts of workers, which may threaten the continuity or the efficiency of such industries, and thus the production or transportation of the necessities of life, or which may produce an industrial strife or endanger the peaceful operation of such industries, it

shall be the duty of said tribunal, on its own initiative, or on the complaint of either party, or on the complaint of the Attorney General, or on complaint of citizens, to investigate and determine the controversy and to make an order prescribing rules and regulations, the hours of labor, the working conditions, and a reasonable minimum wage, which will thereafter be observed in the conduct of said industry until such time as the parties may agree.

" It provides for the incorporation of unions or associations of workers recognizing the right of collective bargaining and giving full faith and credit to any such and all contracts made in the pursuance of said contracts."

We do not deny to any man, or any group of men, the right to quit work (obviously society could not do that and should not do that) but we do deny to any man, or any group of men, the right to conspire to shorten the production in an essential industry, just as we deny the right of any operator to close down his factory for the purpose of affecting wages or the price of his product.

" It provides for a speedy determination of the validity of any such order without the delay, which so often hampers the administration of justice in ordinary cases; it declares it unlawful for any person, firm or corporation to delay or suspend the production or transportation of the necessities of life, except upon application and order of said court. It declares it to be unlawful for any person, firm or corporation to discharge or discriminate against any employee. It makes it unlawful for any person, firm or corporation engaged in said lines of industry to cease operation for the purpose of limiting production, to affect prices, or to avoid any of the provisions of this Act; also it provides a means by which proper rules and regulations may be formulated by said tribunal. It provides for the operation of such industries as may be affected by changes in the season, market conditions, or other reasons inherent in the nature of the business.

" It declares it unlawful for any person, firm or corporation, or for any association of persons to violate any of the provisions of this Act, or to conspire or federate with others to intimidate any person, firm or corporation engaged in such industries, with the intent to hinder, delay or suspend the operation of such industries.

"It provides penalties by fine or imprisonment, or both, for persons, firms or corporations, or associations of persons, wilfully violating the provisions of the Act.

"It makes provisions whereby an increase of wages granted to labor shall take effect as of the dates of beginning of the investigation."

Now, by such means and through such legislation, I believe we will be able to prevent strikes, lockouts and blacklists, by making them unnecessary and impossible, and by giving labor as well as capital an able and just tribunal in which to litigate all controversies, to insure the people of the State at all times an adequate supply of those products which are absolutely necessary to the sustaining of life of civilized peoples. That by stabilizing production of these necessities, we will also to a great extent stabilize the price to the producer as well as to the consumer. That we will insure to labor steadier employment, at a fairer wage, and under better working conditions. That we will prevent the employers from having losses, as well as avoid all those economic wastes which attend industrial disturbances. That we will make the law respected, and will discourage and ultimately abolish intimidation and violence as means for the settlement of industrial controversies.

Those are the essential points of the law. In the last three months we have had several decisions under the law; most of them have been in favor of labor. We have decided a half dozen cases in the mining district, which might have been settled many months ago, but no effort had been made by the leaders of either side to determine them. Today the law is growing steadily and rapidly in the favor of those whom its provisions most affect. I believe that we have found the remedy. I do not believe that it will be accepted instantaneously; it will take time; it will have to make its way, but so far as my observation goes, it is the only remedy that any one has yet discovered, which gives paramount consideration to the rights of the public.

The basis of the law is in the inherent right of the state to protect itself and its members against anything that is prejudicial to the common welfare. This principle has been recognized for more than 20 centuries. It was inscribed upon one of the Twelve Tables of the Roman law: *Salus populi suprema lex.*

Samuel Gompers recently in discussing this law, said that Kansas was on the blacklist; that labor would filter out of the State and we would be left "laborless." I do not believe we are going to lose our workers; they are all there still. Of course, we may lose some radicals, but I believe that for every radical that leaves Kansas, two conservatives will come and we will build there a new type of industrial civilization, one which guarantees justice all the time under sane and impartial pledge of humane government.

PRODUCTION AS A REMEDY FOR INFLATION

GEORGE E. ROBERTS

THE level of prices and state of bank credit at this time command serious attention. The figures for each are about double those of before the war. The increase of bank loans is related to the rise of prices, some say as a cause, and some say as an effect.

Undoubtedly the original impulse came from the war. The war created a practically unlimited demand for labor and materials. The Government let contracts right and left, and contractors went into the markets and bid against each other. And the demands of the regular industries did not fall off, for with the enormous disbursements of the Government, higher wages and a full state of employment, there was more trade than ever and more demand on the industries. The banks, as a matter of patriotic duty, were called upon to lend freely for the purchase of Liberty Bonds and also to support business.

So here was a practically unlimited demand for labor and materials, backed by what for the time being was an unlimited supply of credits, or purchasing power, and brought to bear upon a limited supply of labor and materials.

The object was to increase production, and so long as there was any slack in the industries it had that effect, but when you have every man busy and every machine running, that is about all you can do. When you have reached that point about the only way one employer can increase his own working force is by hiring labor away from other employers, and your efforts to drive the industrial organization still harder expend themselves for the most part in driving up wages and prices. In short, we have created and used purchasing power in the form of credit beyond the increase in productive capacity, and the effect has been to depreciate the purchasing power. The only way to eliminate this inflation is by reversing the process, gradually accumulating actual capital to take the place of the credit.

If the inflation had taken place in the form of paper cur-

rency, issued by the Treasury in direct payment of war expenses, probably most people would be able to see quite clearly that that paper should be paid off and retired, but they don't see it quite so clearly when the credit is in the form of bank loans to customers. Many are even confused to the extent of thinking that the great increase of bank deposits represents new wealth accumulated during the war. But that is a fallacy. When a bank lends $10,000 and gives a customer credit for it in his account, its deposits will go up $10,000, and when the credit is checked out, it will go into other banks and it will continue to circulate as purchasing power, and have the same influence upon prices as money, until somebody checks against $10,000 of actual savings to extinguish it.

But the most serious feature of the situation is that we did not stop the process of inflation at the end of the War. Our bank loans expanded nearly as much in 1919 as they did in 1918, and under the same kind of pressure. We are still trying to drive the industrial machine beyond its capacity. The competition of employers for labor and materials is still going on. The town industries are bidding against each other and against the farms for labor and they are getting it away from the farms. There are authentic instances of town industries sending agents into adjacent farming districts to recruit labor from the farm by direct solicitation and offers. This is like pulling stones out of the foundation to build the superstructure. Official reports indicate that the country over there is 12 per cent less hired labor on farms than a year ago. There are 37 per cent more employees in the automobile industry, 55 per cent more in the clothing industry, 11 per cent more in the paper industry, and from 10 to 93 per cent more in the several branches of the textile industry.

Under these conditions there is a great danger that a further expansion of bank credit will simply finance the competitive struggle and carry the rising price movement still higher. Money is tight, goods are scarce, and there is pressure on every bank by its customers for credit to enable them to go into the market and buy the amount of commodities which they think they can sell, and their competitors are wanting to borrow for the same purpose.

These efforts on the part of merchants to get goods which

they say their trade is wanting, and of manufacturers to hire labor and buy materials for the purpose of making goods for which they have orders, appear on the face of things to represent perfectly legitimate and necessary business, supplying the wants of the people, and therefore entitled to bank credit. The deceptive thing about it is that the demand for goods in the aggregate is greater than can be supplied; it exceeds the capacity of the industries, and under these conditions competition will carry prices higher and higher and absorb any amount of credit that may be granted. It is the war situation over again; the only way of holding down prices is by restricting the expansion of purchasing power in the form of credit.

But the influences for inflation are not all on the side of money and credit; they are partly on the side of production. Industry is disorganized and demoralized in Europe. The supplies of food and raw materials which in times past have come out of Russia are cut off. The normal amount of construction and development work for the expansion of industry has not been done anywhere in the last six years. Moreover, the productive equipment is not being worked as effectively as before the War. This time of scarcity has been chosen as a favorable one in which to cut down the time of operating machinery. The highly automatic machinery of the textile industry has been reduced in running time from 54 hours per week to 48, and a strike is said to be now pending to compel a further reduction to 44. In some instances higher pay has resulted in increased irregularity at labor, and in other cases the ease with which new employment is found is said to cause laxness and inefficiency. Perhaps the revulsion from the War strain is responsible for an involuntary let-down of energy. I heard the Assistant Director of the United States Census Bureau say in a public address a few evenings ago that the performance of the Census force in the tabulation of returns now coming in was notably below the former experience of the Bureau, and that the employees had delegated a committee to ask that the minimum requirement heretofore in force be reduced. This is in Government offices, with seven hours of work per day.

If a single family, situated in a somewhat independent position, as on a farm, should suddenly meet with disastrous losses,

sweeping away its ready capital, crippling its working equipment and involving it heavily in debt, that family would know precisely what it must do in order to regain a prosperous state. It would expect to work harder and more efficiently, live more economically, produce more and save more, until it was back in prosperous condition again. The same principle holds good in the case of such a group of people as a nation. There is a shortage of capital throughout the world, due to the fact that enormous sums have been wasted in war. It is impossible that such expenditures should be made without ill effects reaching all classes of society, and everyone who understands the situation should wish to alleviate it rather than to aggravate it.

It seems reasonable as a proposition standing by itself that wages should increase to correspond to increases in the cost of living. But nothing is more certain than that a general advance in wages can not compensate for a shortage of goods. If you were to double all wages in the United States tonight it would not give you another bushel of wheat, or pound of sugar or yard of cloth. It would simply give everybody the means with which to compete for what he wants, with the result that prices would rise to absorb the additional purchasing power. The only remedy for a scarcity of goods is more goods.

One of the fundamental reasons for the inflation is that there is a shortage of equipment for production and transportation. In this country there is need to spend billions of dollars upon the railroads. The railroad situation has been critical for many months. The farming regions of the Middle West have had great difficulty in moving last year's crop; and country elevators are still filled with grain; the switch tracks of the East are crowded with cars; the banks both east and west are congested with loans which normal exchanges would clear up. Industry in all parts of the country is embarrassed, industrial costs are higher and the cost of living is higher because the railway facilities are inadequate. We need to spend billions for housebuilding to provide shelter to our people. We ought to raise billions to provide credits for Europe, to enable the peoples of Europe to purchase in this country the equipment, materials and foodstuffs which they are needing to sustain life and to make them self-supporting again. A Pan-American

Conference was held at Washington a few weeks ago, attended by delegates from every country of Latin-America, and the burden of their message was a plea for capital for the development of their resources, in order that they might increase the supply of foodstuffs and raw materials in the markets of the world.

These are some of the pressing needs for capital, for the good of the world. Somebody must come forward and supply it, if this kind of work is to go on, and it must go on if social progress is to go on. The gains of society in the last hundred years have come mainly by improvements in industry, by the use of power and machinery, and the gains of the future must be won in the same way.

This problem of high prices leads over inevitably into the larger controversy of the time, the question of how much of current production should be reserved as capital and how much should be consumed as we go along. The evidence seems to show that we are spending too much upon current consumption and not reserving enough for increasing production.

And yet there are many good people who think we have accumulated capital too rapidly in the past, that in the division between labor and capital, labor has been unjustly treated, and that it is bound to have a larger share in the future. But how does anyone know that the condition of the wage-earning class would be better today if more had been distributed in wages and less had been used for the development of industry in the past? You cannot eat your cake and have it, too. The industrial development of this country has been accomplished mainly by means of the industrial profits of the past. If the profits had been less, the development would have been less, the productive capacity of the industries would be less than it is, and the evils of scarcity and high prices would be greater than they are.

There is every reason to believe that if you could cut all profits in two for the coming year, and add one-half of them to wages, the effect would be to increase the demand for goods in the stores, raise the prices of goods still higher, and reduce the amount of capital available for increasing production. And that statement is not a reflection upon the wage-earning people, because the amount of increase to each person would be so

small that it would be almost inevitably lost to productive use. It takes a lot of resolution to save small sums.

The truth is that there is a definite relationship between the compensation of capital and the compensation of labor, determined by economic law. There must be a certain amount of new capital available for investment in order to keep the industries up to the wants of the population. If these supplies are not forthcoming, industry will fall behind, improvements will not be made, production will fall behind, prices will rise and wages in the long run and on the average will decline in purchasing power, because wages must be paid out of production.

On the other hand, if too much is reserved to capital and used for the enlargement of industry and not enough distributed broadly, the purchasing power of the people will not keep up and you will have a period of depression profitable to nobody.

At this time there is a shortage of capital. We see the Pennsylvania Railroad Company, with a credit that is above question, borrowing money for ten years at 7 per cent. This is because the sources which have heretofore supplied capital for the railroads are unable to do so as formerly. The present owners of railroad bonds and stocks are getting no higher returns than before the War. They are paying much higher taxes and higher expenses out of their incomes, with the result that they have fewer dollars for investment, and what they invest will buy less than one-half as much in the way of railroad equipment and supplies as before.

I have heard it said that an investor who builds a house for rent now is entitled to rentals which will fairly compensate him upon the basis of present costs, but that the owner of a house built before the War is entitled to compensation only upon the original outlay. But if the return which the latter receives has less purchasing power than before the War, he will have less savings for investment and the savings will have less value for building more houses than before.

It is a common mistake to think of capital accumulations as of value only to the owners. They are the means by which society is carried forward. The man who owns no property, and who spends his wages as fast as he receives them, is bene-

fited by the capital expenditures that have doubled the average train-load on the railroads of this country since 1900.

New capital must be found somewhere. Where is it coming from? Will it come from wages? Some of it, no doubt. We hope the time is coming when the wage-earners will supply a large part of the capital for the industries, but developments of that kind come by a process of growth and we cannot look for immediate relief from that source. The bulk of the capital for the development of the industries always has come from the industries themselves, and the larger the profits the faster the development has been. Amidst all this denunciation of profiteers, you would be startled if I should say that the profiteer was the hope of the country. And I am not going to give him quite so sweeping an endorsement as that; but it is the plain truth that the rise of profits under these conditions represents the natural workings of the economic law in restoring the equilibrium. There never was such activity in the development of new sugar plantations as there is now around the Caribbean. There never was such an amount of new capital going into cotton-goods production as now. The new projects for mills and extensions in the southern states, announced in the first three months of 1920, exceeded in estimated cost and in weaving and spinning capacity, the new projects for the entire year 1919. The makers of cotton-mill machinery have their capacity sold up for the next two years. The makers of profits are reinvesting them, in hopes of making more profits, and in all haste to increase their production before prices fall.

There is only one way to prevent people from bidding against each other, or to prevent prices and profits from rising, in time of scarcity, and that is by taking possession of the entire supply and making an apportionment at a fixed price. That was necessary during the war when interest was centered upon one immediate purpose, but it is impracticable as a permanent policy, and it does nothing to correct the situation. It neither stimulates production nor provides new capital, and rising prices do both.

We have a riot of spending and it is not the spending of a favored few, but of millions. If you, the public, will not save, the profiteer will save for you. It would be better for you to save for yourself, but if you will not the economic law resorts

to him. You may denounce him, but if he is a producer and using his profits to increase production, whether the process be rapid or spread over a longer time, he is doing something that must be somehow accomplished before we can have a return to normal conditions.

INFLATION AND HIGH PRICES: THE BRITISH SITUATION

J. JOYCE BRODERICK
Commercial Counsellor of British Embassy

THERE is no more important problem confronting the statesmen and economists of the world today than that of inflation and high prices which you are met here to discuss. Upon its successful solution must depend the future peace and prosperity of all the nations and the stability of those democratic institutions which civilized countries have built up through generations of struggle and the defence of which, at the sacrifice of their best blood and treasure in the late war, has resulted in the creation of the problem. It is not surprising therefore that this learned institution should invite its most distinguished members to devote their energies to a discovery of the roots of the evil and to determine upon the best means of attacking them. His Majesty's Ambassador fully appreciates the great importance to the whole world of the work upon which you are engaged. He much regrets his inability to be present at this gathering and, realizing the benefits likely to flow from common counsel on a difficulty with which we are all equally concerned, he has asked me to come here to represent him and to make a short statement regarding our experience in Great Britain.

I must begin by confessing to you that my recent visit to Great Britain was too short to enable me to make any but the most superficial study of conditions prevailing there and you must not expect me to make any really valuable contribution to this discussion. Moreover, the limited time at my disposal since the receipt of your invitation has prevented the collection of the facts and figures, the official reports, the expert analyses and other materials necessary for the preparation of such a paper as I should like to submit to you. I daresay, however, that a short account of the views of more competent observers, including those in official. authority, on some aspects of the question will be of greater use.

I am relieved from making a critical analysis of the causes of the high cost of living by the existence of the declaration issued by the Supreme Council of the Peace Conference on the 8th March last. For this declaration the British authorities are jointly responsible and they are naturally in full agreement with the conclusions it contains. The declaration gives an admirable diagnosis of the situation, and I can scarcely do better than take the principal causes it assigns for high prices, reviewing briefly the position in Great Britain under each head and stating, as far as I know them, the remedial measures there taken or contemplated.

The first cause given is decrease of production. So far as industrial production for commercial purposes is concerned, a considerable decrease was naturally brought about in the United Kingdom by the measures taken during the war period to bend the whole energies of the nation to the successful prosecution of hostilities. To fill the gaps in the firing line caused by the heavy casualties suffered in France, to provide soldiers for active service in Palestine, Greece and Mesopotamia, to place each individual at some work contributing directly or indirectly to the military and naval efforts of the nation, all activity not absolutely essential had to be eliminated. This was accomplished by draining the men from non-essential industries, curtailing progressively their supplies of materials, diverting or decreasing the consumption of the materials, and transferring the men either to active military service or to employment in essential industries. Apart from Government arsenals, dockyards and shell factories, there were in the United Kingdom only two groups of industries in which the number of men employed showed an increase during the war period. These were the metal industries and the chemical industries, the output of which during the war years was entirely devoted to war purposes and, for the most part, destructively consumed. In every other line of industrial and commercial activity the man power was drastically curtailed. Out of a total male working population of ten and a half millions nearly fifty per cent were withdrawn for military service. In many industries, of course, female labor replaced to a certain extent the male labor which had been withdrawn; older employees remained at work beyond the normal age of retirement;

young men were set to work earlier than the normal working age, and men who had never worked before, and who were unfit for active military duties, joined the ranks of industrial labor. In those ways the loss of productive power caused by the subtraction of the young able-bodied male workers was partially offset. There is also, perhaps, a slight compensation in the increase of machinery in our engineering works (made necessary during the war for the manufacture of munitions) as well as in textile machinery, both still usable and at present being used for peaceful industrial purposes. It is probable, however, that the advantages accruing from this increase in machinery were more than balanced by the rapid deterioration of existing machinery and equipment and the impossibility of making adequate renewals.

The net result of the tremendous disturbance and displacement of industry occasioned by the war has been a general scarcity of goods both for domestic consumption and for export. The most serious shortage was that in the output of coal, an adequate and regular supply of which is so vitally necessary to the efficiency of all the other industries, and which plays such an important part in our export trade. Our coal production which stood at 292,000,000 tons in 1913, fell considerably short of that figure during each of the war years, owing to the withdrawal of over half a million miners for military service, and in 1919 the output was still nearly 60,000,000 tons short of the pre-war figures. In the latter year the shortage was due to a certain extent to labor disturbances, but mainly to the fact that during the war period the easily won coal had been worked and the difficult seams left. There was thus an enormous amount of new development work required before output could rise. In addition there was a general depreciation of the plant and a shortage of tubs, that could only gradually be made good.

Responsible persons in Great Britain are and have long been fully alive to the absolute necessity of remedying the general scarcity by an immediate and progressive increase of output. The first condition of such an increase was the demobilization of the armies and the reabsorption of the soldiers into industry. The British Government had worked out a carefully planned scheme of demobilization which con-

templated a release of the men in accordance with their previous industrial employment. That is to say, those men who had formerly been engaged in the transport and the so-called "pivotal" industries would first be discharged and returned to their old occupations. These would be followed by men belonging to industries directly dependent on the pivotal industries, and so on until the pyramid was completed. Had it been possible to put this scheme fully into execution the whole demobilization movement would have proceeded much more easily than it did, since the men, as they left the army, would, in the great majority of cases, find positions ready for them to take up, and the restoration of industry to a normal basis would have been comparatively rapid. But, unfortunately, it was found that great discontent would probably arise if those men who (by reason of the fact that they had been engaged in the most essential occupations) had been the last to be put into active service were also the first to be relieved. It was also found that an exact observance of the demobilization plans would have involved an awkward dislocation of units in positions such as that at Constantinople where it was necessary to maintain them at full strength. Hence the scheme had to be modified. Demobilization had to be accomplished rather in accordance with military than with industrial considerations, and, as I have said, the return of industry to a normal state was retarded. Indeed, for a time, there existed a somewhat alarming percentage of unemployment. The scheme for the grant of a full policy of insurance against unemployment to all soldiers and munition workers which had been determined upon in 1916 had to be modified and expanded, and the Government were obliged to resort to unemployment "doles" and other expedients, the economic viciousness of which they fully realized. The choice was one between two evils, and they chose that which seemed to be the lesser. I am glad to say that these difficulties have now been entirely surmounted. It is estimated that at the date of the signing of the armistice we had 5,000,000 men serving with the colors. The demobilization of this large army has been effected. Our military forces—and I should like to call your special attention to this — our military forces have been reduced to their pre-war strength, to be recruited as in the past

on a system of voluntary enlistment. The so-called "unemployment dole" has been abolished. Unemployment in the United Kingdom is now as low as ever it has been in our recent pre-war history and, so far as labor force is concerned, our industries may be regarded as satisfactorily provided.

I have referred already to our coal industry. In that there is considerable leeway still to be made up. As regards the remainder of the industries you will be interested to know that in those industries where all the manufacturing processes, from the raw material to the finished article, are carried on in the United Kingdom—in spite of the dislocation already described—production today has reached and, in some instances, exceeded pre-war levels. It is true, of course, that international division of labor or specialization has for the present broken down. There are many lines of manufacture in which it was the custom to have the less difficult processes carried out in French, German, Russian and other foreign mills, the partly manufactured materials being then sent to British factories to be turned into the finished article. In those lines conditions are less favorable, as the foreign mills are at the moment completely eliminated and it has been necessary to divert the energies of many highly skilled and, as compared with the Continent, highly-paid British workmen from the more difficult operations to which they were normally accustomed to the less difficult operations previously carried on abroad. One result of this must necessarily be a considerable increase in costs in such lines, but the retardation of output is not too serious and I understand that the progress already made towards normal production is quite appreciable.

Some idea of our general industrial activity may be gathered from the fact that the railways are at the present time collecting and distributing from ten to fifteen per cent, and in some districts thirty per cent, more goods, measured by bulk, than before the war.

There has been a notable increase in the number of persons engaged in industrial occupations. When the last detailed review was made some months ago, it was found that the total number employed in industries amounted to 300,000 more than it was at the crest of employment figures in pre-war times. It is probable that the next survey will show an in-

crease of half a million. These additional work people have come from several sources. In the first place there are more female industrial wage-earners than ever before. Their number is contributed to, but not balanced by, a reduction in the number engaged in domestic service, while a certain proportion were not employed at all under pre-war conditions. They simply lived at home. The increase in the numbers of male workers is partly accounted for—and this applies also to a slight extent to the women—by the fact that there has been a six years' cessation of emigration. It is difficult, however, to estimate how many extra men were made available for manufacturing industry owing to this cause, since many of the emigrants would naturally have been drawn from the agricultural classes; but it is probably not far wrong to say that the war casualties suffered by industrials are about balanced by recruits to industry from men who would otherwise have emigrated. Though this circumstance is satisfactory from the point of view of Great Britain herself, from the broader Imperial standpoint it means that the weight of the war casualties has been practically borne by the Dominions.

Time permits me to say but a few words regarding the labor situation in the United Kingdom. We have lately, as you are aware, been sailing through some very difficult waters, and it must have appeared at times, at all events to the foreign observer, as though we must have suffered shipwreck; but I believe we have shot the rapids successfully and the prospects at present seem to point to smoother waters ahead. The heads of the large unions and other responsible leaders of labor in our country appear to be alive to the necessity of wise statesmanship on their part. They are exerting a good influence on the men and endeavoring to restrict demands within limits which are legitimate.

There has been a decrease in working hours covering pretty well the whole range of British industry, and a 44 or 48-hour week has been almost universally adopted. This decrease, however, has had much less effect upon production than was generally anticipated. There are no data as yet available to show exactly how the production per man per hour will be modified as a consequence; but the general broad result suggests that even with a shorter day there will probably be as much work done as before.

The main effect of the decrease in working hours hitherto observable has been to throw a heavy strain on the transport and transit facilities of the country, since the day's work is now concentrated within narrower time limits than before. Siding accommodation, unloading space, port equipment such as cranes, transporters, and so forth, all require to be increased in number and capacity. Until there has been time to make these improvements, there must inevitably be some congestion.

As regards credit and currency, the figures of the British position are already available to you from the manifesto of the Supreme Council and from other authentic sources. I need not re-state nor examine them here. The British authorities fully recognize the necessity of getting rid of inflation, but they also recognize that sudden deflation could only produce chaos and disaster. The budget introduced by the Chancellor of the Exchequer into the House of Commons on the 19th April and the speech made by Mr. Chamberlain on that occasion set forth very clearly the Government's attitude and proposals. A very drastic scheme of taxation is proposed, involving heavy increases in direct and indirect taxes, and a special committee is at present in session to advise as to the practicability of a special tax on exceptional wealth accumulated during the war. The existing revenue shows a surplus over current expenditure. Fifty million pounds of the national debt has already been paid off and a sinking fund is established to provide for its further reduction. One large funding loan has been raised for the funding of the floating debt, and further prospective operations of this same character have been announced. Government expenditure on the military establishment has been drastically cut down. As I said before, the armies have already been reduced to a pre-war peace footing and no new construction for the navy is at present to be undertaken.

As regards the foreign exchanges, it is felt that any interference would do more harm than good and the authorities have no intention of supporting the exchanges by direct Government borrowing. Their feeling is that the exchanges must be left to right themselves by the ordinary processes of trade. Efforts are, of course, being made to encourage British manufacturers and shippers to increase their exports. This is a matter in which the Government has no power to compel. It

can only exhort. Normally such exhortation would, perhaps, be unnecessary, but it seems to be needed at the present time owing to the severe competition of domestic demand for the goods that usually constitute the bulk of our overseas shipments. Many of our manufacturers have themselves perceived the desirability of setting aside for export a percentage of their total output. Our foreign shipments, we are hoping, will increase considerably in volume from this cause and we look forward to a continued improvement in the figures of the monthly balance.

Before concluding, I should, perhaps, say a word or two about profiteering. With us, as here and everywhere, there are many persons drawing profits far out of proportion to the value of the services they render. I do not speak of profits which, when stated in terms of money are higher than those prevailing before the war. In order to be on a level with pre-war profits, the profits now drawn should, in terms of money, be about two and one-half times what they were in 1913 and 1914. I speak of profits that go beyond any figure that could be justified by the decline in the value of money—profits extorted from the general scarcity and the general distress. The amount of profiteering of this kind which goes on is apt to be, and is commonly, exaggerated. People's minds do not easily make the necessary distinction between increased money profits and excessive profits. But profiteers, who fully deserve their title, do exist in England. They are sufficiently numerous and their operations are sufficiently extensive to stir up labor unrest. It has, therefore, been necessary to devise measures to check them. For this purpose a law known as the Profiteering Act, providing penalties of fine and imprisonment for offenses of this character, has been passed. Its administration is supervised by a Central Profiteering Committee, with sub-committees established in London, enquiring into costs of production and sub-committees handling complaints as to excessive prices. In addition, there are, throughout the provinces, local sub-committees dealing with prices. These committees are empowered to fix a price on any individual transaction brought to their attention by one of the parties to it, and relating to the sales of any article included in a schedule of commodities drawn up under the Act. The committees also have power to enquire into cases of alleged profiteering and to

bring the accused before a Court of Summary Jurisdiction where, if found guilty of shameless profiteering, he may be sentenced to fine or imprisonment. Up to the present, there have been no instances of imprisonment under the Act but several exemplary fines have been imposed. The administration of the Act is decentralized and democratic. The provincial sub-committees are appointed by the local authorities —a circumstance which, under proper safeguards and rights of appeal, gives to the people of each district practical control of the application of the measure and the power to use it as an effectual check upon profiteering, if that evil should assume serious proportions in their midst.

The Board of Trade, of course, has power to fix prices all over the country, but they have hitherto not found it necessary to resort to its exercise.

As I said at the outset, I regret that I have not had time or facilities to enter upon a critical analysis of the various steps we have taken to check inflation and high prices. I am sure this meeting would have valued such an analysis much more than the sketch I have given, but I trust it has been made clear that we *have* grappled with the problem and that our Government and people will bring to its solution the same determination which guided our efforts in the war. We realize at the same time that the problem is no mere national problem which we can hope to solve single-handed. We shall be ready and anxious at all times to exchange ideas with you, to place at your disposal all the facts of our experience, to consider with the greatest care any schemes that may occur to you looking to joint efforts and we expect in this as in every other perplexity to derive great aid from your counsels and example.

INFLATION AND HIGH PRICES: THE FRENCH SITUATION

MAURICE CASENAVE
French High Commissioner to the United States

INFLATION of paper circulation in France has been the object of much discussion abroad. It has perhaps never been thoroughly understood because it has so many side issues with which foreigners are not easily acquainted. I shall endeavor to sum up this question as completely and as compendiously as possible, giving you only facts and figures taken from official publications with a minimum of commentaries.

The Bank of France

In France, paper circulation takes the form of notes issued by the Bank of France (*Billets de la Banque de France*). The Bank of France is a private institution as to capital and management but is under the supervision of the Government which appoints its Governor and two Deputy-Governors. However, 15 Directors, called "*Regents*" and 3 Comptrollers, called "*Censeurs*" are elected by the 200 largest shareholders in a general meeting.

The Bank of France was established in 1800 by Napoleon to facilitate commercial relations by discounting and cashing bills of exchange as well as by opening current accounts. It is the only institution endowed with the right to issue notes that are accepted as legal tender on French territory. This issuing privilege was granted the Bank by virtue of its charter and of agreements concluded between it and the Government, which secure for the Government the following advantages:

1. The Bank pays a tax of 2% on the circulation of its notes.
2. The Bank offers the services of its 584 branches or agencies without charge, in all operations connected with the French Treasury (payment of Treasury arrears and interest on bonds, cashing drafts, issuing Government bonds or loans, supplying bullion, *etc.*).
3. The Bank credits the Government with three quarters of

its profit on the discount of commercial paper, when the rate of discount exceeds 5%.

4. The Bank credits the Government with the value of non-repaid notes a certain length of time after that type of note has been withdrawn from circulation. Then the Government assumes charge of repaying the old notes.
5. The Bank makes advances to the Government on terms that are agreed upon with the Bank and that are then passed by a law of Parliament.

In return for these advantages the Government gives the Bank its support under critical circumstances. In addition, a law can be passed by Parliament by virtue of which acceptance of the notes of the Bank is enforced as legal tender although the right to demand gold for such notes is suspended. This situation is what is called in France "*cours forcé*." "*Cours forcé*" was put into force at the beginning of the war, by a law dated August 5th, 1914.

Although no legal provision exists on the subject of backing the notes of the Bank of France by a fixed amount of gold, these notes in normal times were backed by reserves of about 30% of their value in gold. That this arrangement was adequate and satisfactory at all times is proven by the fact that during the most critical periods of French history, the value of these notes was never questioned.

Amount of Paper Circulation—Metallic Reserves

French paper circulation which in normal times amounted to about 6 billion francs has greatly increased since the beginning of the war, as is shown by the following table which gives the total amount of notes in circulation until 1920.

June, 1914	6	billion.		
December, 1914	10	"	100	million.
June, 1915	12	"	200	"
December, 1915	13	"	300	"
June, 1916	15	"	800	"
December, 1916	16	"	600	"
June, 1917	19	"	800	"
December, 1917	22	"	700	"
June, 1918	28	"	500	"
December, 1918	30	"	200	"
June, 1919	34	"	400	"
December, 1919	37	"	200	"

According to the last statement of the Bank which was issued on April 15th, 1920, circulation at that date amounted to 37 billion 400 million francs.

Of course, it is impossible to expect an increase in gold reserve that would be proportionate to such an extreme increase in the circulation of notes. Nevertheless, an effort has been made in that direction and the reserve of the Bank of France during the war passed from 4 billion 141 million to 5 billion 585 million as the following table shows.

July 31st, 1914	4	billion	350	million		
Dec. 24th, 1917	5	"	350	"	200	thousand
Dec. 24th, 1918	5	"	477	"	600	"
Dec. 24th, 1919	5	"	578	"	500	"
April 14, 1920	5	"	585	"		

The total of the entries in gold, which amounted since the beginning of the war to 2 billion 404 million would have increased the reserve in gold to 6 billion 545 million if the necessity of paying in gold in foreign countries had not reduced them by 1 billion 67 million.

If we stop to consider that this increase in reserve took place during the war, when the richest part of France was invaded and when the French people, with their usual cautiousness, were decidedly inclined to hide their gold, it must be admitted that the readiness with which they exchanged their gold against notes of the Bank of France should be considered a proof of their patriotism as well as of their confidence in the soundness of the Bank.

Causes of Inflation in Circulation—Advances of the Bank to the French Government

Inflation in French paper circulation can be attributed to various causes. It is attributable chiefly to advances made by the Bank to the French Government of the following amounts:

December 31st, 1914	3 billion....900 million
December 31st, 1915	5 billion
December 31st, 1916	7 billion....400 million
December 31st, 1917	12 billion....500 "
December 31st, 1918	17 billion....100 "
December 31st, 1919	25 billion....500 "

At the present date, according to a statement of the Bank

of France dated April 15th, 1920, these advances amount to 25 billion 300 million francs.

During the war, these advances were required to finance war expenditures. They had to supply the difference between expenses and the income yielded on one hand by budgetary receipts, and on the other by the proceeds of loans issued by the Government since the beginning of the war.

The financial policy of the French Government during the war has been subjected to severe criticism. The Government has been accused of having too great recourse to credit and too little to taxation. In France, as elsewhere, winning the war was the sole object the Government had to have in view. The main factor in winning the war was the maintenance of a fighting spirit among the soldiers in the trenches as well as among the people at home. But conditions in France were very different from conditions in other countries. The richest provinces of France, covering one-sixth of the total area of the country, were invaded. According to statistics, out of a total population of 38 million, 8,392,000 men were mobilized. With the total masculine population between 20 and 47 years of age amounting to 9,336,000, the proportion of mobilized men was 89.3% which is far above the proportion anywhere else. This practically limited the population left at home to old people, women and children who were hardly able to accomplish the productive work necessary to pay taxes.

In addition, as fortunes are extremely divided in France, taxation, to be really productive, has to reach small patrimonies, —that means people with small means, petty merchants and bourgeois, clerks and Government employees, small proprietors and peasants.

The heads of these families were absent fighting in the trenches. To add to their suffering by imposing a heavy taxation upon them would have had a dangerous reaction among the soldiers who were so attached to their families. It was a risk that could not be taken. As a final consideration, the ranks of tax collectors were so depleted by mobilization that collection was rendered extremely difficult and the full assessment could not be collected. Thus, instead, mediocre fortunes were asked to contribute voluntarily to Government loans. The great bulk of these loans were taken by people of

wealth, private and public banks, manufacturers, *etc.* Taxation was resorted to as soon as peace was established. It will be greatly increased in this year's budget.

Since the end of the war, from the 31st of December, 1918, up to December 31st, 1919, circulation has increased seven billion francs. *A priori*, this figure for a year when hostilities ended seems very high. We must bear in mind that, during the period in question, expenses that the French Treasury had to meet were tremendous. First, as a result of the cessation of hostilities, the help that had been extended until then by foreign countries was withdrawn so that a large part of payments abroad had to be secured by purchasing exchange on the French market. Then the Treasury had to liquidate numerous war contracts, to maintain a considerable armed force on the Rhine as well as in remote countries of the Levant and the Far East, to continue allotments to families of soldiers until the end of the year and to pay demobilization bonuses—the salary of the French soldiers having been a nominal one during the war.

It must be noted that in reality the figure of 7 billion francs includes the redemption of German marks in Alsace Lorraine amounting to 2 billion francs and of money issued by the cities and townships in the invaded regions equalling about one million and a half francs. Consequently, these two items reduce the amount requested from the bank of France for Government expenses during this period to 3½ billion francs. This figure is more than one billion francs less than that for 1918. The difference was obtained through taxation and loans that increased about 30%.

Since January 1st, 1920, there has been no increase in paper circulation. The variation recorded in the fortnightly statements issued by the Bank originates from the fact that payments can not coincide exactly with receipts. This commendable result has been brought about in spite of the cost of reconstruction in the invaded Departments, which comes up to 1 billion francs per month. Budgetary resources have been developed and long and short term loans have been placed directly with the French public.

Advances to Foreign Countries

Aside from advances to the French Government, another cause for the increase of paper circulation in France is the advances made to Allied countries. The Bank of France has made advances to some nations by discounting French Government Treasury Bonds for them. These advances amount to about 4 billion francs.

Commercial Operations of the Bank

The remainder of the increase in paper circulation at the present moment as compared with circulation before the war is accounted for by the commercial operations of the Bank, the discount of commercial paper, advances on securities, *etc.*

Discounting commercial paper rose considerably at the beginning of the war because of the necessity of rediscounting commercial paper that made use of the moratorium. However, until the end of 1919, discounting new commercial paper had very little to do with the increase in circulation, as the new bills that were discounted hardly exceeded the progressive reduction in bills that availed themselves of the moratorium.

The recent revival in business has evoked additional bills to be discounted and the Bank recently raised the discount rate from 5 to 6% and the rate of advances on securities from 5 to 6½%, in order to indicate the necessity of a policy marked by very great prudence.

Reduction in the Inflation in Circulation

Before studying the means of reducing inflation in French circulation, we must remember that, in normal times, the proportion of money circulation in France was always larger than in England or the United States. The reason for this lies in the fact that the thrifty Frenchman of the lower or even middle class likes to keep his money at home. As he has no bank account, he cannot pay his bills by check. Merchants are accustomed to payments in cash and do not make any effort to change the habits of their patrons. This habit of cash payments is so strong that even among the Banks the institution of clearing houses has met with less success than in other countries. In 1919, the Paris clearing house had only 34 members representing the large banking institutions.

When an opportunity for investment arises, as when the French Government issues a loan, money comes out from the drawers of investors. One may conclude from these facts, given the spirit of thrift among the French people, who pile up money ready for investment, that inflation in paper money is not so dangerous in France as it would be in some other countries where money is spent more freely.

Another very important factor lies in the fact that the people retain complete confidence in the notes issued by the Bank of France. This is due to the excellent management of this institution which has gained it its high reputation. For one hundred and twenty years, the Bank of France has shown itself equal to any emergency or difficulty. Three times only, during this long period, during the revolution of 1848, during the war of 1870 and during the last war, did the Government have to resort to "*cours forcé*," which I explained above. Every French citizen joins in the sentiment expressed in 1871 when the National Assembly decreed that "the Bank has deserved much from the country." No French peasant questions the fact that the notes of the Banque de France are as good as gold pieces. Accordingly, he does not hesitate to pile them up as if they were "Napoleons."

Nevertheless, the French Government is fully aware of the danger that lies in inflation in circulation and has formulated a plan to overcome the difficulty. The execution of this plan has already begun.

Of course any plan of this nature can be successful only if the total expenses of the Government are covered by budgetary receipts and the assistance rendered the Government by national savings. It is also contingent upon having these two categories of resources leave a surplus over governmental expenses permitting repayment to the bank.

New taxes have already been figured to cover and balance the ordinary budget that applies to all the administrative expenses of the Government and arrears in the public debt.

As for special expenses—which include the reconstruction of devastated regions as well as pensions to soldiers who are crippled permanently, and to the widows and orphans of soldiers killed during the war, the Government has decided to limit them to such an extent as will permit the French Treas-

ury to pay them on appealing to national savings without having recourse to the Bank of France.

Disbursements of this nature are, of course, to be taken out later from the indemnity that Germany has to pay France. It is a matter of justice to have Germany pay for the destruction she has wrought. That is why the French conception is legitimate that it is of primary importance to have the Treaty of Versailles enforced.

In the meantime the Government took action by itself in establishing "*Le Credit National*," a bank which was created to assist the reconstruction of devastated France. Its capital of 100 million francs was subscribed without difficulty and the institution has already issued a loan of 4 billion francs for reconstruction purposes to the French people with very successful results.

Another Bank, "*La Banque Nationale du Commerce Extérieur*" (The National Bank of Foreign Commerce) was created under the same auspices to assist French exports.

Banks in general influence paper money circulation only when they open credits that they have to offer for discount at the Bank of France. In this respect French Banks have maintained their traditional reputation for cautiousness during the war. Only since the armistice and in order to assist the revival of business have they allowed their debit account to grow and even then to a very limited extent.

The banks have helped the Government in its endeavour to induce private capital to cover the great needs of commerce and industry. Their appeal has been heard freely. From the day the armistice was declared until the 1st of April, 1920, 13 billion francs in issues have been realized towards that end.

Inflation in circulation is due to a certain extent to extravagance in purchases. These purchases are mostly from foreign countries where exchange is heavily against us at a moment when our exporting possibilities are decidedly hampered as a result of the havoc of the war. The Government has taken radical measures to lessen this evil, by forbidding the importation of articles of luxury. Purchases from foreign lands are thus reduced to raw materials and manufactured articles of prime necessity only.

These steps are only preliminary. They were necessary to

permit the last arrangement which was made between the Government and the Bank to produce results.

By this agreement which forms an amortization plan, passed with the Bank of France on the 14th of April, 1920, the French Treasury has fixed at 27 billion the maximum of advances which it is authorized to draw from the Bank. Thus, present advances which amount to 25 billion 300 million leave a margin of 1 billion 700 million to safeguard eventually against monetary disequilibrium between receipts and expenses that might happen at any time of the year. But it is already agreed that the figure of 27 billion will be reduced to 24 billion before the 31st of December, 1920. Moreover, it will be further reduced by at least 2 billion every year.

It must be noted that this figure of 2 billion constitutes a minimum and may be exceeded. Thus, inflation in circulation could be reduced to its pre-war basis in a maximum of 12 years. This seems a long time but we must bear in mind that inflation such as the present must be dealt with very carefully. France needs money to rebuild herself, money to develop her industry, money to develop that vast and rich Colonial Empire which is destined to play the part in her reconstruction now that your West played in your reconstruction after the Civil War. She needs money to pay her taxes. Too rapid a contraction in currency would certainly lead to a monetary panic which must be avoided before all.

France is the land of surprises. It is not a land of panic. Panic is contrary to the French temperament. We expect, knowing our own temperament, to emerge from the present crisis slowly but surely. Before our eyes, we have the great example of your country. After your great Civil War, you faced the same difficulties that now confront us. You overcame them and built that great and powerful financial, commercial and industrial empire which is now the United States. This is the example which is before the eyes of France as she turns towards her financial, commercial and industrial reconstruction.

INFLATION AND HIGH PRICES: THE ITALIAN SITUATION

B. ATTOLICO
Italian Minister Plenipotentiary and Commissioner General for Finance and Economic Matters

ALL the wars, and this world war more than any other, have brought about a tremendous and long lasting rise in prices. That is because wars cause a destruction of wealth, and belligerent countries face the excessive expenditures which war entails by mortgaging their *prospective* resources. Such a process generally happens through inflation of circulation.

Technically speaking, the elements of inflation are—the expansion of paper money, the expansion of bank credits, and the rapidity of the circulation of both. Sufficient data are available to measure the inflation of paper money in all the most important belligerent countries, and, happily, they show that Italy is not in the forefront with regard to this kind of inflation.

No sufficient data are available to measure the inflation of bank credits. Far from underestimating the technical merits of our banking system, which are many, I should judge from the general state of our economic development that the inflation of credits in Italy has not gone as far as in other countries.

I have, on the other hand, reason to believe that rapidity of circulation must have been greater in Italy than in some other countries. This, however, may be a good sign, particularly if combined with other signs as, for instance, the relative increase in the export trade which, since the armistice, has been greater even than in the case of England. That greater rapidity may, therefore, be an index of greater economic and commercial activity, and to that extent ought not to be reckoned as a dangerous element in the situation.

If, however, the inflation of both currency and bank credits is not so great in Italy as it is in some other countries, then prices in Italy ought not to be as high as they now are. Addi-

tional causes must therefore exist in the case of Italy, besides inflation.

Prices in Italy had to grow higher than in other countries chiefly because no other country felt more than Italy the effect of the displacement of the world markets of supply, and the consequent higher *intrinsic cost* of commodities.

The case of wheat and other cereals is a good illustration. We used to receive them largely from Russia and Rumania. Instead of from Russia and Rumania we had to draw from Australia and Burma and the British Cape Colonies. What I said for cereals can be repeated for many raw materials which we used to receive from neighboring countries such as Austria, Germany, Turkey, *etc.* The consequences of such great displacement of markets still weigh on Italy almost as much as in time of war. Italy feels more than any other country the increased cost of freight. I need only to recall the case of coal freights, for which we paid at one time $26.50 per ton, and we still pay something like $24 per ton, as against $3 per ton in pre-war times.

There is also another factor in respect to which Italy finds herself at a particular disadvantage, and that is *reserve stocks.* During the war, Europe had necessarily to consume the reserves accumulated during long years of production. The war has more or less wiped out all margins that existed. The influence of this is fundamentally felt in the trend of prices. Stocks constitute one of the most efficacious means for stabilizing prices; they prevent fluctuations and counteract the rise; in the absence of reserves of commodities, prices are thrown into a state of fluctuation and any kind of speculation becomes easier.

Now, if all the above is true with reference to the whole of continental Europe, it is particularly true of Italy. The importation of raw materials during the war has been, in Italy, comparatively less than in other Allied countries. I am not talking only of coal but also of raw materials in general. That Italy imported proportionately less than other countries was the finding of the first statistical statement of the kind that the Allied Maritime Transport Council in London attempted to issue in September, 1918. I quote from the document: " . . . It is evident from the above table that in respect to requirements as recently agreed upon by the Programme Committees,

the Italian programmes are in general farthest from fulfilment."

This was, of course, due to the greater disadvantages of Italy's geographic position in relation to markets of supply, to the submarine warfare, *etc., etc.* In spite of that, I am sure a more equitable proportion would have been established in due course through the efforts of our gallant Allies, only—and should I say fortunately—the war did not last long enough for that!

Peace, therefore, found reserves more nearly exhausted in Italy than in any other country, and prices were to a great extent left at the mercy of the most unmerciful element: the exchange.

Exchange! Italy's rate of exchange now is more unfavorable than that of any other great European Ally. The reasons are various. Italy is essentially an importer of almost all raw materials. We *must* import raw materials and in higher proportion than any other continental power. Immediately after the armistice, Italy almost ceased to import on credit. With the cessation of governmental credits only one form of interallied government aid remained accessible and that was the allocation on credit of the enormous quantities of war material, railway equipment, and other commodities which, particularly the United States, had accumulated in continental Europe. We did not participate even in that distribution. We had to import all that we needed and we paid and are paying for it in cash. If private credits have not been abundant with anybody, private credits to Italy have been non-existent.

The most important reservoir of private credits just now is the United States. Italy is almost unknown to the business men of America, and mutual ignorance is not conducive to credit relations; while, of course, Italian interests refuse to pay for risks the basis of which is imperfect knowledge of conditions.

The above circumstances can in themselves justify the lower Italian exchange as compared with others, and this without having recourse to imaginary unsettled internal conditions. Internal conditions in Italy are sound. Premier Nitti telegraphed to me only the day before yesterday that "Italy's situation is the most solid in continental Europe," and that

"popular spirit is more serene in Italy than elsewhere." We had 1070 strikes during the first six months of 1919—only 627 during the last six months. The very day of the reopening of our Parliament last December, an American banker was witnessing the scene in Rome. Newspapers on this side had, only the day before, published the portrait of the successor of King Emanuel. That American banker said that he had witnessed more excitement on many Sundays in Brooklyn than he did that day in Rome, when King Victor Emanuel was to abdicate; and King Victor Emanuel was never more cheered in his life than he was that day.

From a world standpoint never have the so-called moral elements of exchange been more apparent than now. The business world is demoralized; panics are apt to occur at any moment due to exaggerated rumors, which, in the case of Italy, are liable to find more credit than in the case of other countries, on account of the greater ignorance regarding her affairs.

Italy and America have been up to now living so far away from each other that (incredible as it seems) there is not a direct service of information between her and the United States, news about Italy reaching this country ordinarily from Paris or London.

There is another factor in the situation which cannot be altogether disregarded. An Italian business man was recounting the other day, as one of the financial advantages of Italy, the fact that we had not in this country any private debt of magnitude, as other great nations have. My opinion is that that will be an advantage in the end, but, just now, I sincerely wish you had your "feet wet" with Italy, as you have with other countries. Our financial business life not being directly interwoven with yours to any extent, we cannot expect any particular solidarity in keeping up our reputation as a trustworthy debtor.

On the contrary, there must be a natural tendency of business interests to press in quite a different direction. Italians abroad are very good and patriotic remitters of money to Italy. Even the small Italian banker usually accepts remittances which he sends by mail, covering himself at proper time by cable. The more the lira depreciates, the better it is for him.

I do not intend, of course, to over-estimate the effects of the

above; I only mention it in order to show that far from having safeguards and protection, we operate in every respect under the *most adverse* circumstances.

I am satisfied, however, that the present acute level which the Italian exchange has reached, is absolutely out of proportion to the financial and economic stability of Italy. Still we bear it. In spite of everything—many of our cotton mills work sixteen hours per day. This is the first evidence of our financial endurance.

There is another circumstance I wish to recall while speaking of Italian exchange. As you know, the Levant was one of our best customers in pre-war times; both Austria and Germany being among our greatest competitors then. Now that this competition has almost totally disappeared, the Levant is bound to become every day a more distinctly Italian market. We still enjoy there some of the prestige of our ancient great maritime and merchant Republics. No other country has greater opportunities there than Italy; no other country is equipped with better knowledge of the habits and commercial customs; we, therefore, tend naturally to commercial expansion in the Levant. But just now this requires extension of credits, at the temporary expense of our exchange.

Up to now, I have more or less dealt with causes. What about *remedies?*

I need not make here a theoretical exposé of what the remedies might be. Very little could be added to what has been and is continually being said. I want, however, to point out what we are actually doing and what are the signs of our economic vitality.

The commercial balance is improving since the armistice in the most encouraging way. I have already stated that the relative increase of our exports since the armistice, has been even greater than in England. I give a few relative figures. Taking 100 as representing the average monthly exportation of the United Kingdom, France and Italy for the year 1913:

	U. K.	*France*	*Italy*
1913 Monthly average	100	100	100
1919 Monthly average	151.99	126.64	191.87 [1]

[1] January to November inclusive.

The ratio between imports and exports is also most promising, as shown by the following data:

	Exports		*Imports*
1913	1	to	1.45
1918	1	to	4.79
1919 (1st six months)	1	to	4.92
1919 (July-August)	1	to	2.67
1919 (September-October)	1	to	2.08
1919 (November-December)	1	to	2.10

For the first three months of 1920 I will be content to say this: While the imports decreased by 750 million lire, as compared with the corresponding months of the previous year, the exports augmented by almost 800 million lire. This means a rectification of our commercial balance of over 1.5 billion lire in three months. Should this continue at the same rate, it would mean a reduction of 6 billion in the year 1920.

Official statistics just published in Italy show the activity of the Italian Joint Stock Companies from the first of July, 1914, to the 31st of December, 1919. Since 1914, Joint Stock Companies have gradually and constantly increased from 5,517,-365,527 lire to over twelve billions.

Our budget receipts are in constant increase:

1913-1914	2,523,746,000 lire
1918-1919	9,498,390,000 "

As regards the current fiscal year I can say that the original estimate of our receipts has been for the first nine months exceeded by 1,822,000,000 lire. Assuming the same proportions for the last three months up to July, the excess ought to reach 2,500,000,000 lire, in the current fiscal year.

We are cutting expenses most heavily. We have already abolished four departments of ministerial rank.

While a few gay people indulge in attributing to Italy imperialistic designs, we have demobilized 5,000,000 men, that is to say half of our male adult population. We have *not* now under the colors 400,000 men, and we are going ahead towards a further reduction to 150,000 men, which is much less than we had in pre-war times, when our territory did not include Trento and Trieste.

What about deflation? We have, it is true, a bank note

circulation of almost sixteen billion lire (December 31, 1919). If you add to that the state note circulation, you reach an amount of almost eighteen billion lire, quite a substantial portion of this being due however to the redemption of the Austrian circulation in the liberated provinces. But now, *after* the completion of the new internal loan, the aggregate of our savings in the various deposit institutions in the Kingdom, also amounts to eighteen billion lire, while as a consequence of the internal loan paper circulation has automatically been reduced to 12.5 billion lire (31 March, 1920).

I remember having telegraphed to Signor Luzzatti, the new Minister of the Treasury, when he was called to power, asking what he intended to do in order to reduce the circulation. His answer was: " The first step to reduce inflation is to stop it, and I have done it."

But not only has the Italian Treasury Minister pledged himself not to print any new paper under any circumstances, but he has also promised substantially to reduce the existing paper, and Signor Luzzatti is the man who has seen Italy through on many occasions. He brought about, fifteen years ago, the internal conversion of all our national consolidated debt, thereby bringing the lira to a premium on all foreign currency.

Decisions on the subject will be forthcoming very soon, in conjunction with the use to be made of the twenty billion lire which the internal loan in Italy has produced. No other nation which has been called upon for a voluntary loan after the declaration of peace, has given as great a proof of self-confidence. The extreme limit of our hopes was fifteen billion lire; it has been greatly exceeded, and while three-fifths of that amount represents conversion of short-term Treasury certificates (which is, in itself, a great advantage to the Treasury) two-fifths represents actual cash.

But there is another thing of which we are still more proud. Italy has taken the lead in the way of bold, progressive, far-reaching fiscal reforms. I do not intend to go into detail on the subject. I refer you to the special pamphlet I have already published. But I am glad to take this opportunity to show that we do not consider what we have already accomplished as the pinnacle of our efforts. Some further measures have been adopted only last week, improving upon and most efficiently supplementing the pre-existing ones:

1. We had already adopted in December an extraordinary tax on capital varying from five to twenty-five per cent, payable over a period of thirty years. As a consequence of a decree dated the 22nd of April, we have modified this tax by raising the taxable minimum, but at the same time more than correspondingly increasing the quota of taxation for the greater fortunes. More than this, the tax is going to be paid, according to the different cases, not in thirty years, as previously enacted, but in a period varying from ten to twenty years.

2. Another innovation which also dates April 22nd, concerns war profits. Extra war profits in Italy were all along subject and still are to a special war tax, rated progressively, from twenty-four to sixty-six per cent. This tax, being graduated according to the scale of income, represented an average levy of about fifty per cent on the total extra profit. A further levy was added in December, by a tax which hits increase of *capital* derived from the war (that is, the aggregate of all extra profits drawn during the war). This new tribute was rated progressively, and was imposed on all such balance of war profit, on a graduated increasing scale, at a rate varying from ten to sixty per cent. On the 22nd of April we decided further to increase the above rate by bringing the maximum quota of taxation from sixty per cent to *eighty* per cent.

3. The existing system of taxation on land, buildings, and private incomes has been replaced since December last by a single tax on normal revenue, on a flat basis corresponding more or less to the pre-existing taxes, but it has been supplemented by a complementary tax of the same character on a progressive basis ranging from one to twenty-five per cent. No innovation has been brought to this by the more recent April reform.

4. Another feature of the December reform was the increase of the extraordinary tax on interest and dividends from bearer bonds. Such increase has now been augmented and brought by the decree of the 22nd of April to fifteen per cent. On the other hand, in order to prevent evasion of taxation, which is rather easy in the case of bearer bonds held by banking corporations, we have subjected all such corporations to the regime of registered bonds.

5. The increase and development of taxes on government transactions and on the sale of goods, particularly those classed as luxuries, stands as in the December reform.

No other country has gone so far and no other country can claim a reform more drastic and more fundamentally democratic at the same time. Further reforms are still under way.

Of course, it is not possible to venture any precise prediction of the immediate results of all the above measures on our budget. Prior to the new ones adopted in April, the Italian Minister of the Treasury estimated that they ought to yield an additional two billions per year, and that therefore, in 1922 the Italian budget ought to show a deficit of only half a billion lire. The new measures of April 22nd, particularly the one that reduces the period for payment of the tax on capital from 30 to 20 years—and in some cases even ten—ought to wipe out that deficit altogether. Some new expenses may of course come up or new economies be realized. But the data and facts available at the moment fully warrant the expectation that Italy will be the first big continental country in Europe to attain the balance of her budget.

Italy looks to the future with courage and determination. After all, Italy is the youngest European country and also the country in continental Europe which comes out of the war with less debt *per capita* and with greater wealth of thrifty and intelligent labor.

The "learn to smile policy" of our Prime Minister, Signor Nitti, is also a great asset.

In some previous published statements,[1] I have demonstrated that Italy's economic structure makes her a country naturally adapted to peace rather than to war. That is why we had to suffer more than any other big Ally from the war, and why we are still suffering more than many others from the persistence of war economy in the world. But that also shows that once the world approaches normal again, Italy's greater suffering will be repaid with quicker recovery.

[1] See the *Independent* for Jan. 24, 1920; also the *Magazine of Wall Street* for April 3, 1920.

INFLATION AS A WORLD PROBLEM AND OUR RELATION THERETO

PAUL M. WARBURG
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THERE is no doubt that from the economist's point of view our topsy-turvy globe looks gravely ill just now. Mr. World lies prostrate, and the doctors at his bedside are putting their heads together in anxious consultation. A Princeton specialist diagnoses the case as one of acute inflation. If he could only arrest it he believes he could save the poor man. It is this terrible inflation, he contends, that causes Mr. World's high index temperature and disturbed circulation and that makes him consume so much and produce so little of essential substances.

" No," replies another Professor, " he is so inflated only because we cannot cure his condition of under-production and over-consumption."

" Nonsense " says Dr. Vandersnip, " you have doped him too much, that's what causes the trouble. Stop using artificial stimulants and drugs and he will come through."

" How could he have survived if I had not doped him " says Mr. Muchado, the surgeon, " and, having accustomed him to the drugs, how could I withdraw them from one day to another? ".

" Let me stabilize him! "—urges Prof. Irving, another specialist.—" His bloodpressure is unbalanced; let me stabilize it; that would cure him forever! "

Poor Mr. World looks at his doctors and feels very low—, he does not believe they quite understand his case.

What is the matter with Mr. World?

The truth is that he has just passed through a very severe attack of his old trouble—war. He has never been quite free from it. Every now and then he had a more or less acute spell. But whenever it was over he soon forgot all about it and, instead of trying to mend his ways and find a permanent cure, he went back to his old bad habits. This last attack, however, was so grave that Mr. World has made up his mind

to sign a pledge that he will thoroughly reform his mode of living—if only he could survive.

Will he make good when he gets well, or will he forget again? Who knows? But in any event the doctors must get him back on his feet and give him another chance. How can they do it?

Let me discuss the case not from the point of view of the learned specialists, but from that of the plain country practitioner.

In the life and death struggle of war sound economic precepts have to give way to the dictates of self-preservation. What orderly corporation could dare to issue millions of funded obligations for the purpose of covering running expenditures without any corresponding addition to its assets? But Mr. World increased his obligations by more than $200,000,000,000, while his plant and operating efficiency deteriorated at the same time. These loans were the drugs, they were necessary to save the patient, they stimulated his activities, they gave him a feeling of strength and confidence—while, as a matter of fact, each successive loan, like a drug, further weakened him and made recuperation so much more difficult.

Can there be any doubt that from the day of the armistice it should have been our earnest endeavor as fast as possible to arrest the use of drugs, not only on the part of ourselves but also on the part of our friends, and even our one-time enemies? But so thoroughly was the world " doped " that it took over a year from the date of the armistice for peoples to begin to recognize that they were living on a fictitious basis of prosperity; that by continuing to incur more debts, new wealth could not possibly be created, but that instead by increasing the national indebtedness and currencies they were simply depreciating the value of investments saved in the past.

The historian will be amused to register the utterly impracticable and freakish theories and plans that, from time to time, were propounded when our generation was first faced with the problems of price inflation and depreciation of exchanges. Today we smile at the thought that men who consider themselves leaders in economic and financial questions should seriously have entertained the view that prices could

be permanently kept down by price fixing, or prosecutions, and that depreciation of exchanges was due largely to Wall Street manipulations; that exchanges could be kept at par simply by organizing a national institution which should clear all transactions in foreign exchanges.

Today we have no difficulty in understanding that once gold payments are suspended, foreign exchanges largely express the differential between various degrees of price inflation and money depreciation in the various countries affected, and the different conditions of productivity and credit.

We have no difficulty, furthermore, in fastening in our minds the conclusion that now that the United States Government has definitely, as we hope, adopted a policy of living within its income, countries that persevere in covering current deficiencies by piling up additional indebtedness cannot expect to be able to arrest the fall of their exchanges in our markets, by the simple process of incurring new foreign loans.

It is not my ambition in these short remarks to present any new views concerning the causes of inflation, which are generally understood, but rather to dwell for a moment upon the relative position of sequence and importance of its various stages as they impress the country doctor.

When war is declared the first thing that happens is that the government post-haste orders all the things immediately required for the carrying on of the struggle. (Simultaneously people are withdrawn from their regular occupations and others must be attracted to take their places). The chief aim at that juncture is to get the things and to get them at once, the question of price becomes a consideration of almost negligible importance. Moreover, in order to stimulate production to highest efforts and beyond its normal peace capacity, attractive prices must be offered. Large prospective profits, in turn, bring about a competitive demand for materials and labor, and prices are thus started on their long upward flight.

Government war expenditures are incurred with terrific speed and, as prices go up, expenditures rise in a constantly growing measure. War funds must be procured at once, while (aside from the dampening influence that over-taxation would exercise on the war spirit of a country and on its eagerness to increase war production) it takes time to pass laws, to

devise new sources of revenues and to organize the machinery with which to collect taxes. Government bonds must, therefore, be issued and once the beginning is made, subsequent flotations follow in ominously quick succession.[1]

Moreover, high profits and high wages produce extravagance, and no matter how hard any government may try, it has been shown that everywhere government issues had to be placed in increasingly larger amounts than could be absorbed by the actual savings of the people.

It is at this stage only that banking inflation begins to become a factor of far-reaching importance. As long as the countries maintain their gold standards, the necessity to preserve the power of commanding gold, or the fear of losing gold, or the apprehension that banking liabilities are expanding beyond the safe limits laid down by laws or tradition, act as effective brakes against over-expansion in banking and

[1] Permit me to interrupt here for a moment in order to answer Professor Hollander who criticised the Government this morning for having financed the war to so large an extent by the sale of certificates of indebtedness. To criticise is easy—is a French saying. I happen to have been right in the midst of it at the United States Treasury when we entered the war. Demands for money—hundreds of millions a week—were immediate. As already stated, it takes time to raise money from taxation; but it also takes time to raise it from funded loans. Months pass by in devising plans, getting the necessary authority from Congress and preparing the organization for the distribution of the loan. During this period of preparation there is no other way than to raise the funds required through sales of Treasury certificates. By the time the issue of the long-term bonds is launched, the amount raised on certificates has grown already to so large an aggregate that the proceeds of the long-term bond sale hardly suffice to pay off the certificates and keep the Government going for more than a very short time. Each issue of Liberty or Victory Loan Bonds had to be larger than the available savings of the nation. Each issue forced the country to pledge its future savings and left a constantly growing amount of unplaced bonds. The speed with which funds had to be raised for the purpose of financing our Allies and ourselves, was such that it was practically impossible to keep pace with the expenditures by the sale of funded obligations to the investor.

I cannot follow Professor Hollander when he claims that a certificate of indebtedness in itself is an instrument of inflation and the funded debt is not. If the investor buys the certificate in anticipation of the long-term bond, the certificate is no more an instrument of inflation than the bond itself. If a bank buys bonds and pledges them with a Federal Reserve bank, it inflates every bit as much as if it had taken a Treasury certificate and pledged it. It is not the instrument, but what you do with it that makes the difference. The investment market being congested, Treasury certifi-

thereby on over-speculation and excessive rises of prices. In normal times new evidence of wealth is produced by the addition of new tangible objects to the country's balance sheet, less what was consumed in the course of their production. Expressed in unscientific language, this is what would generally constitute the annual savings of a nation. To the extent that in normal times savings do not catch up with the production of new objects, bank credit temporarily will be called upon to fill the gap. But as long as a gold basis is adhered to, there is a distinct limit up to which this expansion may go, when necessity or caution will force a halt. Banking expansion normally increases, therefore, in a definite relation to actual savings—hothouse growth on top of actual savings being limited by the relation to gold reserves which must be maintained. In times of war these boundary lines are removed. The steel ring that before held tightly in its grasp the bulging bale is now converted into a weak rubber band. Investments and deposits do not grow any more as tangible assets of value are added to the country's resources, but they are swelled by government obligations issued for services of no lasting value, and even for work that destroys assets instead of producing them. Moreover, the rise of prices naturally increases the loan structure, which can now grow without let or hindrance, for serious consideration is no longer given to the shrinking of the gold reserve and, savings being unable to absorb government bonds as fast as they are issued, reserve balances are created and currencies are issued against loans on government bonds, or as in some countries, against direct advances to the government. As long as reserve balances are created and circulation is issued only against self-liquidating paper,

cates had to be placed largely with banks, and often with a view to being carried by the Federal Reserve banks. That meant inflation, no doubt, but no other way was open to pay for the war.

Whether more generous rates of interest, offered by the Government on its long and short term borrowing, would have assured better distribution, whether it would have saved the subscribers some part of their present losses, whether after the armistice higher interest rates should have been conceded more rapidly than they were—these are points on which observers may well differ. But that could only prove whether or not mistakes were made in handling the machinery; the machinery itself, which consisted of taxation and long-term bond issues, with intermediate sales of certificates of indebtedness, was, in my opinion, the best that could have been devised.

which represents things in course of production, and as long as this process is kept within a safe relation to gold, there may be more or less acute banking expansion, but there would not be any cause to call it inflation. It is when bank loans, reserve balances or circulation are being created against things that do not represent any tangible value, and gold reserves are disregarded, that we face inflation in its classic form. Indeed, with us that inflation took place, when government securities to the extent of approximately one and a half billions became the basis for Federal Reserve bank loans, even though, due to particularly fortunate circumstances, we were able to preserve a remarkably strong gold protection. (This was only possible, however, because at the beginning of the war we had a vast gold treasure wastefully decentralized, in scattered bank reserves, or in actual circulation, and because we were able to concentrate this gold effectively, and to add to it a billion dollars which came to us from foreign countries.) It is of the utmost importance that we realize the fundamental—though in protracted wars unavoidable,—part played by government borrowing in causing inflation. I can hardly perceive that inflation could have taken place in any country enjoying a modern elastic and well administered banking system, if government printing presses could have been prevented from doing their nefarious work.

We must clearly bear in mind the three different stages in the process of war inflation: first, rising prices caused by the precipitate demands for goods by the government and accompanied by disorganized production; second, depreciation of money caused by the process of rapidly increasing the national debt (in form of bonds or currency) in advance of the country's saving power; and finally, inordinate bank credit expansion, degenerating into inflation as a consequence of the dilution of reserve money and circulation through direct or indirect government loans. It is true that as bank-credit inflation progresses, it, in turn, becomes an active factor in depreciating the value of money and in boosting prices. But, to my mind, this development is the evil counter-effect of the other two, not, as some economists appear to think, the primary cause.

You may ask: why lose so much time in this analysis of causes and effects? Because the word inflation, though covering a multitude of sins, is often used as designating one disease, and as a consequence, there are many that seek relief in one single remedy, while it is all-important to grasp it as firmly as possible that Mr. World is not suffering from any one particular sickness, but from several. He is at present like a patient suffering from a broken leg, a toothache, and an attack of pneumonia. The three things combine to make him feel miserable, but each ailment must have a separate cure.

Increase of government indebtedness must be arrested, and national budgets must be balanced, by reduction of expenditures and increase of revenues. (Indeed, wherever possible, a gradual amortization of government loans must be aspired after.)

The inordinate demand for things must be met by increased production and by greater moderation in the extravagant consumption of goods.

Banking inflation must be combated by an earnest attempt to reëstablish and preserve the healthy check placed upon us by a conscientious observance of our gold obligations, which implies a stricter control over bank loans and a greater effort to liquidate excessive loans, commercial and governmental, by savings.

The world as a whole must tighten its belt if there is to be enough for all. That belt is a strict control of credit without which the world will continue to gorge itself and inflate.

While to the layman rising or falling gold reserves may serve as the most impressive gauges from which readily to judge to what extent our banking situation gains or loses in strength, as a more reliable standard to indicate banking expansion, and its effect on price levels, we should at this juncture rather watch, the item "total investments" in the Federal Reserve statements. We might be forced to export hundreds of millions of gold, seeing our gold reserves correspondingly reduced thereby, and still be justified in continuing to do our business without disturbance or alarm; our general position of overtowering strength remaining unaffected, due to the large debts the world owes us as a whole. On the other hand we might gain several hundred millions of gold, which would in-

crease our gold reserves, but we should not be inveigled thereby into establishing lower interest rates or into encouraging a planless increase of the Federal Reserve banks item of "total investments," which would involve further banking and price inflation. Larger gold holdings would simply indicate that we should have accumulated greater strength for the possibility of such expansion provided that, in due time, it could be based upon the natural growth and the solid foundation of increased production and actual savings.[1] It must be our first concern

[1] It is obvious that this paper could not possibly presume to give an exhaustive or scientific survey of the whole problem. I am dealing with the question of inflation only as it affects modern central bank countries. In these, a loss or gain of gold does not automatically increase or decrease inflation. The potentiality of greater expansion or contraction is increased in each case, but the powers and the discretion of those in charge of the system play an important rôle in determining the immediate effect. In a primitive country, having nothing but a plain gold circulation and little or no deposit banking, an influx or outgo of gold might have an immediate effect on prices. Conditions are vastly different in countries with elastic note issues and immense deposit structures (approximately $42,000,000,000 in the United States) where the basic gold dollars (estimated at less than three billions) form only a very small amount when compared with the superimposed pyramid of credit dollars (circulation, deposits, bills, checks, *etc.*). It appears extremely doubtful that by giving a smaller or larger gold content to these basic dollars as far-reaching results could actually be obtained in the direction of stabilizing prices as are expected by the proponents of the plan of stabilizing the dollar.

They claim that the weakness just outlined could be remedied by pursuing a reserve and banking policy strictly in line with the basic gold policy as directed by index numbers. They concede that in case of extraordinary fluctuations stabilization would break down as soon as it should be necessary to suspend gold payments, indeed that it would have broken down during the war and that it would probably precipitate an earlier collapse of gold standards in future cases of abnormal strains. I believe that most students of the plan agreed furthermore, that if it could be taken up at all, it would have to be on international lines. In that case, it would appear most improbable, however, that even in the case of minor fluctuations Central banks could carry into actual effect a plan likely to involve a simultaneous demand for additional gold on the part of many countries, or, failing to secure gold, a simultaneous determined effort to contract outstanding note issues in the countries affected. That, indeed, is the very thing Central banks would probably be unable to bring about in such times. To illustrate, let us suppose that England and we had stabilized the pound sterling and the dollar a year ago. In order to hold prices on the stabilized level, it would have been necessary for both to increase their gold holdings, and having found it impossible to draw gold in sufficient quantities from the rest of the

however to get the world back upon a basis of normal production and if it should become imperative for that purpose temporarily further to expand—then, I believe, and only then, should we be prepared to make an exception to this rule and permit it. When an engine reaches the dead point, we often have to reverse it in order to get the train started in the right direction. When we have a weak customer, who owes us a great deal of money, we sometimes have to loan him more in order to enable him to get over his difficulties and pay us back. In other words, we must arrest planless inflation, caused by hysterical competition and crazed speculation and extravagance, and husband our resources so that we may use them courageously when we know for certain that expansion is devoted to purposes that ultimately will bring a cure; that it is a definite means towards a definite essential and constructive end which, in this case is to arrest the endless rise of prices and to prepare the way for ultimate deflation.

It is important, however, to recognize that inflation will only capitulate if a concerted attack is made from all the three sides I have described. Banking contraction alone cannot effectively be brought to bear if the government continues to

world, they would have had to attempt a reduction of their currencies so as to increase the percentage of the gold cover to a degree corresponding to the rise in index numbers. But we must ask ourselves how could they have succeeded in actually reducing their outstanding currencies? Both countries as a matter of fact have been striving for that result and failed. Does an announcement of the intention to stabilize give the material power to do so to any larger extent than our present wish and will to arrest inflation? By what means could governments be expected to reduce outstanding currencies? The answer is: by raising the necessary funds through increased taxation and by cancelling a corresponding amount of circulating notes. But does the will to stabilize force legislatures or enable countries to raise, or submit to, additional taxation in order to cover their deficiencies any more than the present will to arrest inflation? We doubt it, and doubt it very seriously.

Bearing in mind that the stabilization plan does not promise any protection against the fluctuations caused by any abnormal stress; bearing in mind, moreover, that if carried into effect it would involve the rescinding of all existing sacred pledges to pay "in gold of the present weight and fineness," bearing in mind furthermore the additional difficulties and doubts I have just outlined, and others that it would lead too far here to discuss, I believe very strongly that the practical advantages to be gained do not outweigh the disturbances, dangers and disappointments that, to my mind, would follow from its adoption.

increase its indebtedness in payment of current deficiencies, nor can it succeed unless production is increased. By attempting to curb loan expansion and government issues, we may at best prevent a further rise of prices but we cannot hope substantially to reduce prices if, in addition, we do not manage materially to increase production; unless, indeed, consumption be decreased to a larger extent than at present appears possible.

And this leads us to another very obvious conclusion, which is that, with labor conditions what they are and extravagance being what it is, it is foolish to expect that the few countries living in fairly undisturbed economic and social conditions could speed up their lagging production to a degree sufficient to make up the deficiency caused by the voluntary or enforced idleness of countries involving more than 200,000,000 people in Europe.

The world before the war had become one closely interrelated economic unit. The products of the mines of Chile and Norway had become as important components of European and North American industrial life, as Brazilian coffee and Chinese tea had grown to be integral parts of our diets, and Manchester or Chemnitz goods had become necessaries in the lives of the Chilean and Australian. Two countries, geographically remote from one another, might face ruin or starvation unless they could exchange foodstuffs or coal, or other goods or materials. The war, and the social upheaval following in its wake, have brought about drastic changes in the relative positions of capital and labor. The latter, in the future, will insist upon a larger share in the results from its work—and will claim this larger share, moreover, for a smaller return in work.

In the face of these circumstances is not the inference all the more inevitable that it is idle for us to assume that we could get the world back into a condition where goods seek the market more than the market seeks the goods, in other words, that we may come to see an era of receding prices, until the entire world returns to a fairly normal state of production and interchange. Until that is done, the demand for goods will dominate the situation; and as long as the demand for goods reigns supreme, labor will have the whip hand both as to wages, and the services it is willing to render at any price. We cannot

expect to get control over wages and prices (nor can constructive labor master its own difficulties) until the world as a whole puts its house in order and until labor in Europe competes again with labor over here.

It is quite evident that such glaring disparities as at present exist between our own prosperity and the acute suffering in some parts of Europe in the long run will not be permitted to prevail. Unless we indulge in the impossible assumption that peoples can be caged up, so that they may perish of disease or starvation without disturbing their neighbors, we must expect that by sheer force of necessity these hungry and desperate hordes will come over here in order to share with us our own plenty and opportunities. Some twenty or forty millions of additional immigrants, to be fed and clothed by us, would quickly solve a substantial part of our problem of placing our excess production. Would such extreme development, however, be the most economical, the most humane and, for us, the most desirable solution; and, if it is not, what is the alternative?

Over here we have a shortage of labor and an over-supply of raw materials. Over there, Europe has an excess of labor and a shortage of raw materials. We have high wages; Europe has lower wages. We have too much food; Europe starves. We are the world's creditor; Europe is in our debt and has not the means with which to settle. Is not the logical solution of this problem that our capital should go right into the countries that at present most need a helping hand? Instead of increasing certain plants in our country where there is a shortage of labor and higher prices would it not be logical that we assist in putting into operation similar plants in countries with excess labor and lower prices, where, in consequence of the unprecedented depreciation of their exchanges, in some cases we could buy factories or properties at a fraction of what it would cost to reproduce them here? Is it not obvious that by furnishing European countries with raw materials and credits, we would help them to restart their economic life and place them in a position where they can pay their just debts and where, in the long run they can work their way back to approximately the same standard of living they enjoyed before the world was thrown into the turmoil of war?

The ways in which this could best be done would differ according to the varying political, social and economic conditions of the countries affected. In some the usual methods of granting short-term banking credits and of buying securities, foreign or their own, may still be applicable. In others, where foreign exchanges are subject to violent fluctuations, or where the local currencies have become so depreciated that in world markets they have practically lost their purchasing power, it might be indicated to combine the sale on credit of raw materials with a contract for the sale of the finished articles, into which the raw materials are to be converted. In others it may prove the best solution to buy part ownerships in existing factories or plants.

There never was an opportunity for an undertaking more tempting from the economic point of view and more appealing as a work of healing the wounds that a crazed world has inflicted upon itself. Governments have shown that they are capable to direct, and that they can unite in directing, the work of destruction. In coöperative work of reconstruction, most governments, so far, have shown themselves dismal failures. The bulk of that work (barring relief to be given to peoples facing extirpation or decimation by starvation, disease or economic ruin) will have to be carried on not by the governments, but primarily, as it would seem, by the direct initiative of the peoples.

One could fill a large volume in discussing the question of private enterprise *vs.* government operation. It has well been said that either our political and economic problems must become smaller or our leaders must become bigger. Tested by billion dollar and one hundred million people units, the human genius and capacity of the present generation has been weighed and found wanting. Speaking by and large, I think, therefore, we should beware of drawing any government into activities it could in fairness avoid. The larger the government's scope of operations, the larger must be the number of billions it must raise. Excessive taxation is a wasteful and uneconomic procedure, because it continuously withdraws funds from points where they have converged for productive purposes and at once scatters them again. It is a violent and haphazard process of distribution,—funds often being taken from those

that produce in order to be placed in the hands of those that waste—and at best it involves a long continuous and costly interruption of the flow of money into the channels of production. Moreover, whenever the government's expenditure moves ahead of the country's saving power, this distribution takes the form of inflation.

Inflation, as we all know, is the cruelest and unfairest method of taxation. It arbitrarily decimates entire classes of the most valuable elements of our population and blindly enriches others, amongst whom are those who gamble and profiteer in the very things the world most urgently requires. The heavier a country's burden of expenditure and the vaster the volume of funds it must collect and distribute, the more drastically does it interfere with the healthy development of private enterprise and the nearer does it draw to the fatal abyss of so-called "socialization" or "nationalization."

Bearing these circumstances in mind, one cannot but follow with genuine alarm the impending danger of seeing the government committed to an expenditure of more than $1,500,000,000 involved in the contemplated soldiers' bonus legislation. It threatens to lead to the alternative of overtaxation, or increased Treasury borrowing of a temporary or more permanent character. In one form or another it would, therefore, lead to inflation or disturbance and delay the ultimate adjustment.

In closing permit me to sum up the practitioner's advice in the case, as follows:

We must fight inflation with all the means at our disposal:

First by arresting the further increase of government indebtedness and, if possible, by reducing it;

Second, by trying to call a halt on further bank credit and note-issue expansion, destroying thereby the atmosphere of easy money and paper prosperity that makes for individual and corporate extravagance and fosters discontent amongst the masses and renders them disinclined to give their full measure of work. In doing this we must boldly tackle the most difficult task of curbing the production of unessentials and of stimulating the production of essentials;

And finally, we must fight rising prices by stimulating essential production, not only here but also abroad, which means that we

must furnish Europe with the materials required in order to rehabilitate her industries so that once more she may become self-supporting. As far as this involves the granting of further credits, it should be our determined purpose to provide them from our savings; if we are incapable or too irresponsible to accomplish this, we must submit to paying for the unsaved balance by inflation. That would prove, as we have seen, a wasteful and highly regrettable alternative, but it is easier for us to bear the sacrifice than for Europe. Moreover, by curbing extravagance it is in our own hands to counteract the evil effect of such loans. Irrespective, however, of the moral or humane issues involved, from the purely selfish and practical point of view, we know that unless we help Europe to preserve her industries and social institutions, we may not ourselves hope to regain control over prices and wages; and social unrest and disorder in Europe are bound to throw their shadows across the Atlantic and the Pacific.

Further inflation, carefully measured and applied, may thus become a painful remedy in case we fail to master our extravagance. Obviously, we must not permit the dose to be made one single grain heavier than the most conscientious study, and our most determined efforts to avoid it entirely, may warrant. This duty of carefully restricting to the minimum this measure of our support is an even graver one with regard to its recipients than with respect to its givers. For European countries of today are staggering under the load of their debts; any new obligation adds further to their burden, and increases the difficulties of their ultimate recovery. Support must, therefore, be restricted to the minimum that would remain as an imperative and irreducible requirement after a country abandons its vicious war habit of printing notes and obligations in order to cover current deficiencies, and after it arrests the flow of easy money and credit that encourage extravagance. For no good purpose could be served by pouring water into a tank without a bottom.

Mr. World cannot be cured by fake patent medicines, but only by sound habits of hard work and thrift. Moreover, Mr. World must remain conscious of the fact that his body has many component parts, all of which must be brought to their normal functions before once more he will feel truly comfortable and happy.

Sir Auckland Geddes expressed this thought in a recent speech when he said:

> Until Europe is herself again, our own conditions cannot be normal, and the problem of restoring Europe is largely bound up with the fate of Germany, Austria and Russia.

Our relation to Europe as a whole is not different from that of England to the Continent.

In other words in solving the problem, the same rules apply to us all. If, in order to help Europe to return to a basis of order and increased production, we are to tighten our own belt and save, or, failing that, to bear the additional burdens of inflation, Europe herself must do her share whole-heartedly in bringing about that result. We can help Europe to regain her productive powers only as European countries help one another in that respect.

With that great force and straightforwardness which we have learned so deeply to admire, Signor Nitti said:

> War and peace are not only facts. They are states of mind. The trouble with the world to-day is that it is still in a war state of mind. It must get into a peace state of mind. The war is over. Let's have peace. Every man and nation must produce to the utmost. Without real peace the nations cannot produce.

No truer words have been said. Even though, through a pitiful combination of circumstances we, of all nations, are technically still at war, and thereby forced to stand aside at the very moment when we should be leaders in the front rank, the all-important fact remains that the war has been ended since a year and a half, and that reconstruction and peace must at last become an actuality amongst the nations. Not until a clear and practicable program is laid down for Europe's future economic life, and not until our own relation thereto has been definitely established, shall we reach a basis on which America will be able to throw herself confidently and unreservedly into the task.

Encouraging progress in this regard appears to have been made at San Remo during the last week and it is to be hoped that the next two months will at last bring a definite and clear basis for a world at peace. No more auspicious moment could have been chosen for the convening of an International Finan-

cial Conference, now called together by the League of Nations for the end of May, at which these puzzling economic and financial problems are to be discussed by experts from all the countries affected. It is greatly to be wished that the United States, officially or unofficially, may be represented at this gathering. A full and frank disclosure of prevailing conditions in lending and borrowing countries will convey to all participants the much needed information concerning basic facts, without which a comprehensive remedial action cannot be confidently undertaken. It will acquaint the borrowing countries with the limitations of possibilities, and the difficulties, prevailing in lending countries. On the other hand, closer knowledge of progress already made in some of the borrowing countries would instill greater confidence on the part of the lender, while, in other cases, it would impress the would-be borrower with the necessity of taking certain measures prerequisite in order to enable the lender to render support. My own feeling is that the conference will find that requests for direct financial relief on the part of governments will form a comparatively unimportant part of its recommendations. I believe that the conference is likely to reach the conclusion that the main rôle of governments at present will be,—to use a slang expression,—to remove "the monkey-wrenches that have been thrown into the machinery." It is uncertainty, disorganization, and obstruction that hurt Europe more at this time than lack of raw materials and credits. If governments will coöperate in eliminating these obstacles, I believe that most of the very grave difficulties, now existing, and still to be met as we progress, can be overcome by individual effort and ingenuity. It may become necessary, for that purpose, to organize private enterprise to act in large national units, and these in turn may have to group themselves internationally for the purpose of combined coöperation; but I can well imagine that all of this can be brought about with comparatively little direct financial support on the part of governments, but with their unreserved moral backing and sympathy.

I should, furthermore, hope that our representatives would come back from the conference with a message inspiring enough to give us the impulse—sadly gone to pieces since the Armistice —for a common plan of action in finance and business. Think

what we might be able to do today if the billions absorbed by speculative and unessential enterprises had been used to pay for Liberty Bonds (which in some years from now will prove to have been a better speculation at present prices than many stocks) and if in bank portfolios we could have replaced war paper by a corresponding amount of bankers' acceptances. But how could we expect to free half a billion of dollars, with which thus to finance raw materials and goods moving to and from all parts of the world, if million-dollar crack-apartment-houses, oil speculations, corners in motor stocks, and the like, are permitted indiscriminately to absorb available credits and investment funds, even though the loans of our commercial banks during the last 11 months show the alarming increase of 25 per cent. It is true that we are tired of governmental regulation and paternalism, but they can safely be avoided in present circumstances only if voluntary regulation and self-discipline will assert their influences in combating financial anarchy. The conference could not fail to make emphatic recommendations concerning what is to be deemed "essential" and "unessential" for the general good, and I hope that their findings may arouse us over here to common action in that respect.

The experts would probably agree on the further conclusion that the case before them is so complex that any broad rule adopted will have to be applied with discretion, taking into careful consideration the particular conditions of each country. Furthermore, they may be relied upon to be in accord upon the advisability of not depriving a patient of his crutches before he may be able to walk.

When once the problem is thoroughly understood in all its intricate phases, and when a clear and practical program is adopted assuring the old world's future peace and prosperity, I have the abiding faith that America will do her duty towards Europe honorably and fully.

From aristocratic ages we have taken over the old beautiful saying: *Noblesse oblige*. Translated into plain democratic American language it means that we cannot seclude ourselves and aspire to live in wealth and contentment, while the rest of the world suffers poverty, starvation and distress. If we were willing to accept that position, we could no longer keep our heads high as citizens of the United States when in the future we gaze into the eyes of our fellow-men.

It would be a tragic irony of fate if the most unselfish and most generous effort ever made by a nation should lead to such a pass. That outcome is unthinkable. No matter how much at present we falter and flounder, that ultimately we shall rise to the standards of our proud traditions, nobody can doubt who knows and trusts in the fair-mindedness and self-respect of the American people.

DISCUSSION OF CONTRIBUTION THE UNITED STATES MAY MAKE TOWARD IMPROVING THE EUROPEAN SITUATION

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W. S. KIES
Aldred & Co.

Mr. Chairman, Ladies and Gentlemen: I feel that it is presumptuous in me to attempt in a few moments to discuss so learned a paper as the one you have just heard. Mr. Warburg stands preeminent among economists, and everything he says is always listened to with appreciation and a feeling of confidence in the soundness of his ideas.

Dr. Warburg is the highest type of a modern practitioner. He is sane in his prescriptions. He prescribes plenty of fresh air, exercise and a good healthy diet, but I am afraid he may not be entirely popular these days if he does not include just a bit of stimulant. For the condition in which he describes his patient to be, stimulant, I think we must all agree, is necessary.

I was pleased to hear him say that the occasion might arise where we should have to stand more inflation in order to do our duty to Europe. There are many men who do not think deeply on economic subjects and who become impatient at times with fundamental economic principles (and we meet a great many of them nowadays). These men say: " Why can not this country with its 250 billion dollars of wealth, owning 40% of the gold supply of the world, establish the credits that are needed in Europe? Why do we hear this continuous talk of deflation when the rest of the world is inflated and world deflation must necessarily extend over a long period of years?"

There is a feeling of impatience among a good many men with whom you talk about the policy of drastic deflation which has been adopted in this country where we have suffered so slightly from the ills of the war. It is said very frequently: " Why is it necessary to keep our gold reserves at 40%? What is a reserve for if it is not to be used in times of stress? Why do we have 8 to 15% call money in the United States, and London reports 4 to 6%? Why do we penalize the development of our industries these days by these high

money rates when that penalization will act as a burden on these industries for years to come? Why arbitrarily attempt to depress and restrain industry."

To those who argue along this line I recommend a very careful study of Mr. Warburg's paper. He answers these questions quite conclusively, and in answering them stands on sound economic ground. The one fundamental thing which so many people overlook is that credit must be based upon wealth, and that to be in a position to grant credits to Europe we must produce, save and create new wealth which will serve as a basis for credit. Where we have an excess of raw materials without the labor, then sound economics and sound business require that where the labor cannot be brought to the materials the materials should be brought to the labor.

Every European country today is asking for credit. We may look at this question in a broad international spirit from a world viewpoint, or we may look at it purely from a selfish American standpoint and our conclusions must be the same. From the world view the sooner these countries in Europe obtain the raw material and the means of production the sooner they can produce and add to the world's wealth. We have all read the stories of suffering in Poland, and of the new nations that have been developed out of Russian and Austrian territory. We have had vividly pictured for us the conditions in Germany and Austria, but somehow we do not seem to appreciate the critical nature of things on the other side. We know that there are millions of our fellowmen willing to work, but with no tools, no raw material and nothing with which to work, and we know that as a result of the lack of material and tools they are subsisting on starvation rations, and each day their condition becomes more hopeless and wretched, and yet knowing and realizing these awful conditions we do nothing.

This brings the problem home from a broad humanitarian standpoint. If we have the cotton in this country we ought to find some way to give Europe the cotton and let them manufacture it. Our government, however, has apparently washed its hands of the whole affair. Our politicians in Washington debated the Treaty for months, and nothing constructive resulted from that method. As a nation we have apparently said to Europe, "This government cannot help you, you must look for assistance to the bankers of the United States," and I say to you, ladies and gentlemen, that the problem is too big for individual bankers to handle, no matter how powerful or how able they may be.

If we look at this matter from a purely selfish standpoint, if you will, we must reach the same conclusion, that some scheme of granting credit must be worked out in order to again build up the buying power of Europe and develop and maintain permanent markets for the excess production of this country.

Statisticians tell us that before the war the United States had an excess manufacturing capacity of 30%; in other words, we were capable of producing 30% more than we could consume in this country. 1913 saw the beginning of a national movement in aid of the policy of the extension of our foreign trade. A foreign trade council was formed about that time, and as a result of the pressure of American manufacturers Congress provided in the Federal Reserve Act for the establishment of branches of American banks abroad. American manufacturers began to study the problem of foreign markets, and the beginning of the war found the country organized for foreign trade.

During the war our industrial capacity has still further increased. It is generally estimated that this increase has been at least 25%. At the present time production in this country, as everywhere in the world, has not kept pace with the demand, but the demands for goods are unusual and abnormal. During the war people had to deny themselves everything. Production in all lines was restricted, and the entire industrial activities of the country were directed toward producing the goods that were needed in winning the war. When the lid was lifted and the days of sacrifice apparently over every one again began to purchase what he wanted, and everybody wanted everything that he hadn't had for two years and wanted it at once. The result has been that there were two or three purchasers for everything, and the holder of the goods was able to exact his own prices.

When the edge of this insistent demand is dulled and we get back to a more normal basis where our production will exceed the natural consumption demands of the country, where will we sell our surplus products? Where will be the customers with buying capacity? Our greatest market before the war was Europe. The size and permanence of a market depend upon its buying power. People cannot buy unless they have the means with which to buy. These means result from the saving between production and consumption. Unless Europe can be brought back on a producing basis so as to be able to save something with which to pay for goods in the world's markets Europe as a market will be without buying power, and we cannot develop any substantial trade with her.

Looking at the matter, therefore, from a purely selfish standpoint, the industrial prosperity of the United States depends upon rebuilding Europe as a market for our excess products, and this cannot be done unless Europe now is given credit in the shape of tools and raw materials that will enable her to get back to a producing basis.

Up to the passage of the Edge Bill we had no machinery in this country for financing our foreign trade upon a permanent basis. Our system of banking has resulted in the building up of great commercial banks, but these banks are deposit banks obtaining their working capital from depositors. As the great mass of deposits are payable on demand, sound fundamental banking principles make it necessary that these banks remain liquid, and that they do not invest their money in long-time paper. In this position of strained credit conditions every accommodation over three months must really come in the class of long-time paper. In other words, the commercial banks of the country deal in credits, and the conditions of world trade today are such that it must be financed by capital instead of credit. Capital today must be defined to mean any accommodation over six months.

Properly to finance our foreign trade we need to build up in this country a new kind of bank, one that will obtain its working capital from the investors of the country through the sale of its obligations based upon credits granted abroad. This is the character of banking institution authorized by the Edge Bill. To be more specific, the Edge Bill provides for the incorporation under Federal charter of banking associations which are permitted to exercise all the functions of international banks. Their operations are to be under the supervision of the Federal Reserve Board. They may engage in banking operations of all kinds, but are obliged to restrict these operations to international business. They may accept deposits in this country only as such deposits are incidental to foreign business. Subject to certain restrictions, they may accept deposits in foreign countries in so far as the laws of these countries permit them to do so. They may establish branches in all parts of the world, and may own stock in foreign banking associations or foreign banks up to a certain percentage of their capital. They are given very wide latitude in establishing connections abroad for the development of foreign business. The way is thus left broadly open for coöperation with foreign banking interests in any particular country or countries.

In addition to exercising the ordinary banking powers, Edge Bill banks are permitted to issue debentures, notes or other obligations up

to ten times the amount of their capital. The way is thus prepared for the issuance of an obligation of an American banking institution under supervision of the Federal Reserve Board which shall be based upon the security of foreign credits with or without the endorsement of the American exporter, as the case may be. If a market for these securities can be made, and the American investor educated to put his money into investments of this character, then at last we will be able to place America's foreign trade upon a sound basis. Europe needs credits for periods of six months up to three years depending upon conditions in the various countries. No commercial bank can extend these credits. The Government has declined to do anything further. Unless the people of this country, by investments in securities of Edge Bill banks, are willing to extend the credits, the United States will not only lose its great opportunity of laying a firm foundation for future permanent foreign markets, but it will deny to Europe the aid which it has in its power to give, and retard the rehabilitation of those countries whose direst need is credit in the shape of raw materials and working tools to enable them to rebuild and reconstruct their shattered financial and industrial structure.

The Edge Bill has provided the machinery. The question is, have we the leadership and the ability to develop international banks that can do their part in the present emergency? Are the American people broad-minded and far-sighted enough to support this kind of institution? We cannot finance our foreign trade in any other way. England has made wonderful progress since the armistice. Their bankers have a grasp upon the situation, and are getting a hold upon the business of the world. They have the courage and vision to do things. We have been talking and not acting.

The extension of credits, even those credits which are absorbed by the investors of the country, may mean a further inflation, but our supply of gold and the vast fundamental wealth of this country furnish a base for even further expansion where such expansion is necessary to the world's welfare. To extend the needed credits requires that the process of deflation perhaps must be arrested, but we have progressed far more toward deflation than any of the other countries, and if the sound financial brains of England consider it necessary to continue on an inflated basis while the credits are granted for the purpose of rehabilitation, is it not possible that we might to advantage follow their leadership? May we not be making a mistake in taking a stand for too immediate and too drastic deflation when by granting credits to Europe we will be building a foun-

dation for future foreign business which is necessary to the continued industrial prosperity of this country?

It will be a difficult thing to educate the American investor to an appreciation of his opportunities and responsibilities at the present time. Dr. Warburg has pointed out that billions of dollars have been lost in unsound, reckless gambling investments in this country in the last few years. If the money in this country which has been put into wildcat promotions could have been placed in sound foreign investments, and this work could have been organized a year ago, as it should have been, conditions in Europe would not be nearly so serious as they are today. If a year ago intelligent government leadership and help could have been back of such a movement, Europe would have gained much time and been spared infinite suffering.

The people of the United States have a great opportunity. No nation has ever been so thoroughly advertised by its accomplishments. Our feat in organizing and equipping an army of 4,000,000 men, of transporting them to the other side, and developing them into a successful fighting unit has never been equaled in history. At the close of the war we were looked upon as the saviours of Europe and the great nation of the world. Leadership in world affairs was practically conceded to us. Today, because of the mistakes we have made, because of our inability to furnish intelligent leadership in the work of financial reconstruction, and our failure to develop any constructive plans for helping Europe, we have lost much of our prestige. We have been generous with advice, but our friends on the other side contemplating our wealth, our power and our ability along so many lines may well say to us, " why is it that with your vast resources you cannot devise some means to place at our disposal your raw materials, and why can you not work out some sound financial plan that your people will back, so that we may have an opportunity to rebuild our industries and do the very thing you tell us we must do, produce and save, but which we cannot do without raw materials, tools and machinery?"

This country still has a great opportunity, ladies and gentlemen, not only to assure for itself future commercial and industrial prosperity, but to bring back to health and strength a sick and suffering world. We can accomplish nothing by talk, but will do things if the right kind of leadership can be found in this country to point the way, and if as individuals we all charge ourselves with the obligation of doing our part in support of such sound constructive

measures as may be developed. If America will get together to help Europe with the same spirit that it exhibited during the war our friends on the other side will not be disappointed in the ability of the American people to accomplish results.

II

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The hour is so late that I shall condense my remarks and confine them strictly to two chief topics. The first one is suggested to me by Mr. Warburg's reference to what may be called "European Industries on the Bargain Counter," opportunities for investment over there that, given certain conditions, might look very tempting for American capital.

I come to the same idea by a somewhat different route. Scarcely more than a year ago many of us were speculating as to how the European nations were going to go about repaying us the money which we had lent them. I was called upon on various occasions to make suggestions as to the mechanics by which this might be done. Looking back, in the light of present conditions, it is clear that we thought too much about how Europe was going to pay the debts she owed us and too little about how she was going to restore her own industries and get upon her own feet again. But an examination of the various mechanical processes by which her foreign debts might be paid is nevertheless not without profit. The same mechanics which would be required for paying debts must be used for the solution of the more urgent problem that confronts us, the reduction of inflation.

Of course it is impossible to pay great international debts in money. That plan we will reject at once. Usually they are paid by an excess of exports over imports on the part of the debtor country. That is unquestionably the ultimate source of payment, regardless of what may be done on a capital basis. For, looking at a problem of this kind by and large, in the long run it is the movement of goods from day to day and week to week and month to month and year to year that is far more important than the capitalized profit which may flow out of that movement. It is the constant stream that we require; that is what we have to live upon; that gives us our daily bread. There are difficulties, however, in the increase of European exports to the United States or imports by the United States from

Europe. One is, of course, the lack of production in Europe under present conditions, which has been so frequently commented upon today. Another one which I expected to hear mentioned is the fact that our American consumers are not educated to a large consumption of European goods, or of foreign goods. There are many desirable things which the French produce (and we know France perhaps better than some of the other countries) which our people do not know or are not educated to use. Moreover, there are many desirable things produced in other parts of the world which we would be glad to have if we knew about them, and which might come to us indirectly in connection with the discharge of the foreign debts. But there is always a possibility that a debtor who cannot pay from his current production, can pay in property, and so we come back again to the possibilities suggested by Mr. Warburg of buying, or lending upon the security of foreign properties, preferably, of course, properties of a productive character. I confess I don't know how this can be accomplished. We have been absorbing to a very small degree the securities of foreign or European cities, but the purchase of those city securities and bonds has been more in the nature of gambling on the fluctuations of exchange than of any real investment calculated to meet to any extent Europe's immediate need of capital.

What seems to be lacking is any agency that would examine into the soundness of the various investments that might be offered as security and even guarantee them. Whether we would be willing to send capital over there to be secured by mortgages upon various industries depends upon whether we can learn about them, and the means of examination and the dissemination of information now available are entirely inadequate. The linguistic difficulties are an obstacle, and then, of course, sad to say, there is at the present time a still graver difficulty in the lack of confidence we have in the political permanency of governments and the solidity of economic institutions under the present disturbed social conditions.

The other topic that I wish to touch upon is the setting of our own house in order in the matter of national finance, government finance. We have been talking a great deal about budget legislation. Every movement has to have a slogan and a name and sometimes we forget to go behind the name. In my home town some time ago there was an attempt to float some bonds for the purpose of building a new high school. The canvassers went about the city asking, "Are you in favor of bonds?" If you asked them what bonds,

they would say, "Just bonds." So a good deal of our agitation for a budget has been along the same lines, and the man who questions what kind of a budget is apt to be looked upon as a strange creature.

Now there are a great many different budget systems. A European budget system, based upon the fact that the government is responsible directly to Parliament, and represents the majority in Parliament, is absolutely impossible in this country because we have conserved the principle of absolute separation of the executive from the legislative departments. We have at one time or another in a half-hearted way, in the federal government, but more often in our state governments, tried a great many different kinds of executive budgets, budgets prepared by executive departments. I suppose it is safe to say that something like twenty-five hundred of them have been submitted during the last one hundred years, and to assume that ten of them were passed is to make a liberal estimate. To say that as many as one hundred of them had any considerable influence would also be an exaggeration. Most of them are forgotten. Many of them were never read.

Under our system of separating the executive from the legislative department in the United States, the executive department is effective only so long as the governor or the president has a majority in the legislative department which will vote as he directs. A legislative budget is an unreality because a congressional committee cannot have the proper facilities for obtaining the information which it requires. We really must go farther if we are to accomplish the desired results. There are two things to be aimed at through the movement that is commonly called the Budget Movement. One is to bring about economy in expenditures. To determine whether any particular line of expenditure shall be taken up or not, is outside the province of any budget-making body. That matter rests in the hands of Congress entirely. But after the general policy of expenditure has been specified, economy may be brought about, and the wisdom of the proposed detailed expenditure of each dollar or of each larger sum authorized by Congress may be scrutinized through a sound budgetary system.

Our states have shown the way through their boards of control, which in many states have developed so large a body of knowledge and experience that the legislatures very naturally turn to them for further information and rely upon them in making further appropriations. We have an example of how the central idea of that method may be carried out in the federal government in the case of

the reorganization of our old pension system some years ago, when rules were laid down as to the conditions under which pensions should be granted, and Congress kept its hands off from interfering with the individual details.

The second purpose of a budget is a better supervision of the revenue system. As to the general principles of taxation, Congress alone must decide, but as to the administration, the carrying out of any type of tax, we need more expert guidance than we are now getting. In fact, the actual administration of the taxes we now have has, upon the frank avowal of the Treasury Department, broken down and ceased to be effective. Our Income Tax, we are told by the Treasury Department itself, could be made to bring in vast sums in back taxes, and could certainly be made to yield more without change of rates or other essential change in form, if the government had an effective administration. Such an administration could also advise Congress in the present perplexing situation, where we need to have additional revenues to make our budget not merely a balanced budget, but one that shall leave a goodly surplus each year for the reduction of our debt. In the debt itself we have a bottomless pit into which we can pour any surplus revenues for a number of years to come.

Great Britain has gone about this matter in a much more systematic way than we have. Almost immediately after the war she appointed a Royal Commission to investigate the entire subject of the Income Tax. That Commission has just reported.

If we set our own house in order, if we bring our federal finances into proper shape, we shall be able to stop one of the most important possible sources of inflation, namely the continued borrowing for public purposes.

HIGH PRICES—CAUSES AND REMEDIES

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ON this subject there is now such general agreement that even the Supreme Council of the European Entente Powers has become aware that high prices are due to too much money and credit and too few goods. When once the cause is seen the remedy is obvious but not therefore easy to obtain. We want more goods or less money and credit or both.

More goods can only be produced if people will work harder. A great many people, at least on the European side of the water, have been deluded by the War's experiences into a belief that if only governments spend enough money there is wealth for everybody and consequently do not see why they should work as hard as they used to, and in many places those who are willing to work cannot work as hard as they would for lack of material, machinery and transport. It seems to me that only uncomfortable experience can cure the delusion that the need for hard work is an obsolete anachronism. Those who would work and cannot for lack of supplies can only be helped to get to work if those who command surplus buying power will place it at their disposal in the form of loans. This can best be done through the ordinary machinery of private investment and credit, and this machinery cannot be expected to work freely until political stability is secured and a beginning has been made towards correcting the abuses of government finance in the countries that now have to appeal to foreign investors. Even then it will be a difficult task under present conditions to secure by saving anything like the amount of capital that is necessary; and it is by saving that the true remedy for this part of the problem has to be found, since saving transfers buying power to those who need it whereas creations of new credit merely make new buying power to compete in the depleted market for goods. On this side of the world it may almost be said that all governments are discredited and their appeals to those whom they rule to work harder and spend less

are laughed at in the light of the example that they have set. But it is still perhaps possible that a clear statement by leaders of financial opinion showing the world's needs for goods and capital and that working and saving are the only way to find them might have some practical effect. If once the goods and capital were available and if once political and economic stability were secured in the countries that need them I have no doubt that private enterprise would put them where they are wanted owing to the prospects of great profits that are held out.

As for the too-much-money end of the problem its details differ widely in different countries but of practically all it may be said that the way to attack it is by redemption of credit and currency out of the surplus of revenue—real revenue collected out of the pockets of the people by taxation and not by official sales of war stores—over expenditure. In England, at least, the banks are hampered in their task of financing industry by the large holding of government securities which is a legacy of the war. As fast as these securities can be paid off, out of tax payments which diminish bank deposits, so fast will the ability of the banks to finance industry be increased without causing any net addition to bank deposits.

Many Englishmen, who ought to have known better, have blamed America for the low value of sterling in New York, just as many Frenchmen and Italians blame England for the depreciation of the exchange value of their currencies in London. Every country is responsible for the value abroad of its currency which reflects the extent of the effort it is making to be solvent. As long as official extravagance continues and as long as the printing press is used to paper over the gap between revenue and expenditure, as long as official meddling and control discourage production and warp distribution, no help from outside can effect much. We want peace in fact as well as in name and the free interchange of goods between all countries before a real impression can be made upon the scarcity from which the world is now suffering.

I am asked to express an opinion on the Anglo-American aspect of the remedies for high prices. I find it difficult to do so in the first place because it is a world problem, in the second because it is paradoxically a problem which each country has to solve for itself, and in the third place because it is a problem

which presents quite different aspects to America, which is practically self-sufficient, and England with her dependence on a world-wide trade. Nevertheless coöperation on it must be valuable between our two countries, yours with its boundless future and ours with its great industrial past. And I am inclined to think that a conference organized by the business leaders of both nations and attended by business representatives from the leading neutral countries and others that are in a position to dispose of capital might effect something by an explanation to the workers and capitalists of the world as to what is needed to stop the rise in prices, and to the governments of the impoverished countries as to the measures that have to be taken before capital can be expected to flow to them.

Finally it is my conviction that a great step would have been taken towards improving economic sentiment if the American and English governments were to wipe out the war debts to them of the European countries which fought by their side and have been much more seriously impoverished than America and England. If this were done and England's war debt to the American Government were funded into a 40 or 50 year loan something would have been done towards lightening the international burden which is part of the after-war European nightmare.